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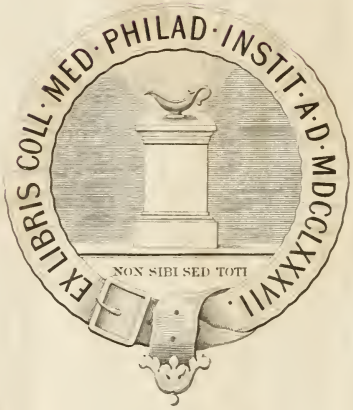

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ORIGINAL COMMUNICATIONS.

TRANSACTIONS OF THE MEDICAL SOCIETY OF EAST TENNESSEE, AT ITS ORGANIZATION, OCTOBER 31ST, 1855, HELD IN THE CITY OF KNOXVILLE.

In accordance with a previous notice, several medical gentlemen met in the Basement of the First Presbyterian Church, for the purpose of organizing the Medical Society of East Tennessee.

Dr. John J. Moorman being called to the chair, addressed the Convention on the objects and benefits of the proposed association.

Dr. John L. Atlee was appointed Secretary pro-tem.

Dr. Ramsey offered a resolution that all motions and resolutions be offered in writing. Adopted.

By Dr. R. O. Currey. *Resolved*, That this Convention be now organized into a Society to be called "The Medical Society of East Tennessee," which, being seconded, was unanimously adopted.

By Dr. Ramsey. *Resolved*, That the Ethics of the American Medical Association be taken and adopted, as the basis upon which this Society is organized, and of any further act which it may adopt, except on such particulars as may be, by written and formal resolution, abrogated. Adopted.

Dr. Currey moved that the Constitution and By-Laws of the former East Tennessee Medical Society be read and adopted, or

18954

amended as this Society may choose, whereupon the Society adopted the Constitution and By-Laws as appended to these minutes.

Dr. Ramsey called the attention of the Society to the fact of the publication of the Southern Journal of the Medical and Physical Sciences in this city, and offered the following resolution.

Resolved, That the Southern Journal of the Medical and Physical Sciences be adopted as the organ of the Medical Society of East Tennessee, which was adopted.

Dr. Birdwell of Sevier moved that the Corresponding Secretary of this Society be appointed an Associate Editor of the Journal on the part of the Society.

Dr. Currey, one of the Editors of the Journal, remarked that whilst he was gratified at the resolutions adopted, and highly approved of them, it would be necessary to submit them to the consideration of his confreres in Middle Tennessee, and if they met with their sanction, he would at an early day signify their acceptance to the Society.

By Dr. Ramsey. *Resolved*, That Dr. Hodsden of Sevier, Dr. James Rodgers, of Knox, and Dr. Atlee, of Athens, be, and are hereby appointed a committee to obtain from the Legislature of the State of Tennessee, now in session, for the Medical Society of East Tennessee all the immunities, privileges and duties now granted by Charter to the State Medical Society of Tennessee, and that in this particular the East Tennessee Medical Society shall have jurisdiction in and over the counties composing the Eastern District of the State of Tennessee, and any act of the censors appointed in said Divisional Society shall have the force and effect of an act passed by the Medical Society of the State of Tennessee. Adopted.

The Society then adjourned to meet at the Coleman House at 6½ o'clock, P.M.

Evening Session.—Dr. Hodsden, President pro-tem, in the Chair.

By Dr. Currey. *Resolved*, That this Society now proceed to an election by ballot, for officers; which being adopted, the following gentlemen were elected.

8383

Dr. JOHN J. MOORMAN, of Knoxville, *President.*

Dr. R. H. HODSDEN, of Sevier, Dr. SAMUEL PRIDE, of Monroe, *Vice-Presidents.*

Dr. O. F. HILL, of Knoxville, *Recording Secretary.*

Dr. F. A. RAMSEY, of Knoxville, *Corresponding Secretary.*

Dr. JOHN L. ATLEE, of Athens, *Treasurer.*

By Dr. Birdwell. *Resolved*, That the Physicians of the different counties be invited to form County Societies, auxiliary to the Medical Society of East Tennessee, and that they be requested to send delegates to the annual meetings. Adopted.

By Dr. Ramsey. *Resolved*, That the annual meeting of this Society be held at Knoxville on the evening of the first day of the Fair of the East Tennessee Agricultural Society in 1856, and that quarterly meetings be held alternately at Rogersville, Jonesborough, Athens and Cleveland.

Dr. Pride moved to strike out all that part of the resolution after the time designated for holding the annual meeting—which being seconded, was passed. The vote was then taken on the amended resolution, and it unanimously passed. (That the Physicians of East Tennessee may appreciate the motives for fixing the time and place of the annual meetings permanently at Knoxville, we publish on another page the remarks of Dr. Pride, of Maryville, on his motion to strike out the last clause in the resolution of Dr. Ramsey. Ed. Journal.)

It was moved and adopted that a semi-annual meeting be held in this city on the second Wednesday of April next.

And on motion of Dr. Ramsey, the President was empowered to call meetings of the Society at his pleasure, at other times and places, than are regularly designated by resolution and by-law.

Dr. Samuel Pride was elected to deliver an address at the next semi-annual meeting in April.

By Dr. Ben. Franklin. *Resolved*, That primary Medical Schools as recommended by the American Medical Association, be, and are hereby commended by this Society, and the members pledge themselves to encourage and sustain such schools. Adopted.

By Dr. C. W. Crozier. *Resolved*, That the Recording Secretary of this Society be requested to prepare for publication in

the newspapers of East Tennessee, a statement of the organization of this Society, the names of its officers and the times and place of its meetings. Adopted.

Dr. Currey presented a bill from Messrs. Kinsloe, for printing circulars, which was ordered to be paid.

Dr. Crozier moved that Drs. Rodgers and Ramsey be appointed to tender the thanks of the Society to the Proprietor of the Coleman House for the use of the Gentlemen's Parlor during the present session. Adopted.

Dr. Atlee was appointed to read a paper on the following subject at the next semi-annual meeting, viz: Does Inflammation consist in increased or diminished action? After which the question to be open for discussion.

During the sessions the following gentlemen signed the Constitution, and paid the annual fee of one dollar.

Dr. R. H. Hodsden, Sevierville.
" James Rodgers, Knoxville.
" Ruel Birdwell, Sevier co.
" Jno. L. Atlee, Athens.
" B. B. Lenoir, Roane co.
" Benj. Franklin, Monroe co.
" Frank Bogart, " "
" C. W. Crozier, Knoxville.
" Stephen H. Smith, Knox co.
" O. F. Hill, Knoxville.
" William A. Rodgers, Woodburn.
" Richard O. Currey, Knoxville.
" Samuel Pride, Maryville.
" Frank A. Ramsey, Knoxville.
" John J. Moorman, "
" W. L. White, Loudon.

Receipts of the Society—

From Members	$16
" Old Society	6
	$22
By Kinsloe's account	1
Balance in Treasury . .	$21

The Society then adjourned to meet on second Wednesday in April, 1856.

SPECIAL MEETING.

KNOXVILLE, Nov. 9th, 1855.

In accordance with a call of the President, a special meeting was held on the evening of the 9th of November.

Present, Drs. Moorman, James Rodgers, Crozier, Ramsey, and Currey of Knoxville, Smith of Knox county, and Atlee of Athens. Dr. Currey was appointed Recording Secretary pro tem.

The President, Dr. Moorman, stated the object of the meeting to be:

1st. To adopt some regulation in reference to the admission of new members.

2nd. On the subject of addressing a circular to the members of the medical profession in East Tennessee.

3rd. To petition for a charter.

4th. To adopt a Certificate of Membership.

Dr. James Rodgers offered the following resolutions on the first subject which, being seconded, were adopted.

Resolved, That in the absence of a regular meeting, all applications for membership shall be filed with the Recording Secretary, and that said applications, with all others made at a regular meeting, shall be referred to a committee who shall be appointed for the purpose, who shall report on the merits of said applicants.

Resolved, That in all ballotings for membership a two-third vote of those present shall be requisite to elect.

Dr. Ramsey moved to amend the last resolution, by requiring only a *plurality* of those present upon which the vote being taken, it was lost.

The ayes and noes were then called for on the original resolution.

Ayes.—Drs. Moorman, Currey, Rodgers and Crozier.

Noes.—Drs. Ramsey, Atlee and Smith.

So the resolution was passed requiring a two-third vote to elect to membership.

On the second object of meeting, Dr. Currey offered the following resolution, which was adopted.

Resolved, That the President and Corresponding Secretary prepare and have printed a circular, setting forth the objects of this association, and address a copy to each member of the medical profession throughout East Tennessee, soliciting their co-operation.

The third and fourth objects of meeting having been acted upon at the previous meeting, no further action was had upon them.

The Society then adjourned.

Remarks delivered by Dr. J. J. Moorman on taking the Chair to preside over a meeting of Physicians, convened in Knoxville on the 31st of October, for the purpose of forming a Medical Association.

GENTLEMEN: In behalf of the Physicians of Knoxville, allow me to assure you that it gives us very great pleasure to see you in our midst;—to be permitted to form your acquaintance—and to exchange these social greetings whose influence are as pleasant as they are liberalizing to the professional mind.

It is to be regretted, gentlemen, that the isolated position of physicians from each other—the *individuality* of their employment, and the fact that they seldom meet to confer together, have a direct tendency, if not to estrange them from each other, at least to prevent those close *personal ties*, and that liberal social intercourse which ought to be a distinguishing trait in our profession. Of all the professions gentlemen, ours ought to be the most *liberal and social*, as it is, with the exception of the ministry of grace, the most *benevolent and philanthropic*.

If, gentlemen, as has often been charged, our profession be wanting in social and friendly intercourse, it arises not from the nature or demands of the profession, but mainly from the facts to which I have just alluded.

But, gentlemen, the charge, though often made, is *not true* in the general. It is my pleasure to know that many of the closest

and most cherished friendships of my life, have existed, and been long maintained with medical men with whom I have had the longest intercourse—and such, I am sure, is the experience of many of my professional friends.

We trust, gentlemen, that the occasion of our present conference will be agreeable and beneficial to us all:—and that it may result in cementing social relations which shall *augment* and *brighten* as time floats us along on the current of life.

Gentlemen, the *leading object* of our present *re-union* is to obtain a mutual approbation and concurrence in the formation of a *Medical Association*, to be known as the *Medical Society of East Tennessee.*

This, you know is not entirely a pioneer effort.

In 1848, a medical society was formed in this city, and held its meetings in various parts of East Tennessee. It flourished for a time, but owing to want of a general patronage it languished, and finally expired in about three years after its inception.

Its failure was greatly regretted as I understand, by many votaries of the science who had anticipated great good from the association.

It is believed, gentlemen, that the time has now arrived when an effort may properly and hopefully be made to re-organize the association. It is thought that the increased number of physicians in East Tennessee and the laudable spirit of emulation and improvement that animates them, loudly calls for this renewed effort.

I shall not, gentlemen, offer the indignity to the good sense of my intelligent auditory by entering into an elaborate argument to *prove* the advantages that may result to the profession from such an association we propose to form.

To do so would be to bring into question facts and principles so well established as not for one moment to admit of cavil or gainsaying.

The immortal bard of Avon long since declared that, "to guild refined gold, to paint the lilly, to perfume the violet, to smooth the ice; or with taper light attempt the beauteous eye of of Heaven to garnish, is wasteful and ridiculous excess." So, gen-

tlemen, would it be wasteful and ridiculous excess, to attempt to prove to the intelligent medical mind of East Tennessee, that great advantages would result from a generous association of physicians for the promotion of the important science which they pursue.

To argue that advantages would not result from such an association, whose object is the dissemination of important facts connected with the profession, would be to honor the *Old Black Letter* age of the profession, when learning and science were confined to *cells* and *cloisters*.

It would be to repudiate the justly boasted progress of the age in which we live;—to discard the advantages of the art of *printing*—and the usefulness of the press in disseminating the experience and observation of our enlightened cotemporaries.

It would be to prefer the plodding cogitations of a single mind isolated from contact or communication with all other minds, to the multiplied observations and experience of the rest of mankind—and to deny the well established proposition "*that knowledge is power*."

This being so, you will not expect me, I am sure, to trespass so far upon your understandings as to attempt to prove what *you all admit*, that is, that *great advantage* may result from the association which we propose, by which every member of the profession may avail himself of the observations and experience of every other member.

Ours gentlemen *is a noble profession*—noble alike in its objects and its end. It is noble *per se*—it *is noble* by comparison.

What pursuit is more noble, important and *responsible* than the protection of the health and the preservation of the lives of our fellow men? And what greater confidence, let me ask, can one man repose in another, than to confide to him the task of curing his diseases,—of relieving his sufferings—and of warding off the keen shafts of the destroying angel.

By way of illustration, let us for a moment contrast the *essential* dignity and importance of the medical profession, with the familiar profession of the law. The latter, being in this, and in all popular governments, the usual highway to political prefer-

ment, is eagerly embraced, I know, by a very large and very meritorious class of the talents of the country—and *in its legitimate aims*, and high developments, it is a *noble* and *dignified* profession.

Its *true aim* is to maintain the great rights of man, *sociably* and *conventionally*.

But the medical profession is superior in importance in the same ratio that human *sufferings* and *human life* is superior to the possession of property, or conventional rights.

But, gentlemen, our profession has a RESPONSIBILITY, precisely commensurate with its dignity and importance.

Oh! what an awful responsibility is that of the physician, called on as he constantly is to relieve the sufferings and *save the life* of his fellow mortal!—and the physician who does not feel it—ah! and painfully feel it at times, would be recreant to all the finer feelings of the human soul.

Often in my professional life, has my inmost soul been wrung with keenish anguish from the inability of the profession, or my want of skill, to arrest the march of the fell destroyer in his inroads upon the health and the life of the *head* and *hope* of the family, or upon the young life of the lovely child—and while too the anguished parents would make the most affecting and confiding appeals to my skill for the relief of the sufferer.

We have all been placed in painful circumstances of this kind; —indeed it is the common occurrence of our profession, but one with which my mind has not, and I trust never will become so familiar as to make it one of indifference.

But our profession gentlemen, is greatly elevated in point of RESPONSIBILITY over that of the *laws*,—and especially in this, that while *mistakes*, or *want of skill* in the practice of the law, may generally be corrected:—*in our profession never*.

If the lawyer for want of knowledge of his profession, or of skill in exercising it, loses his *cause*, and thus sacrifices the interests and rights of his client,—his errors may be corrected by a *new trial*,—an *injunction*, or an appeal;—the court above can correct the errors of the court below. But not so with the Doc-

tor;—from his mistakes or mal-practice, no *injunction* can be taken, no *appeal* is possible—the DIRT covers over *his* errors;—the power of man is estoped;—from the grave there is no appeal,—and *Heaven's chancery* far beyond the ken of frail mortality is the only tribunal in which reparation can be sought.

It is just as true in the practice of medicine as it is in other sciences, that *knowledge gives power*, or in other words, *gives skill.* No man was ever born a physician,—no man is a physician by *intuition.* It is only by thorough mental training; by accumulating states of knowledge based upon the correct principles of the science, and by careful observation, that any man ever becomes a well qualified physician, prepared to meet and combat disease in all the multifarious forms and phases which it assumes.

True, we sometimes hear the ignorant say—such and such a man "*was born a Doctor*," and it is sometimes added, that while he has "very little knowledge or judgment on any other subject," "*he is a good physician.*" I utterly deny the soundness of any such conclusion.

Such an one may be a *routine case Doctor*, and may successfully treat *simple cases* with which he may chance to be familiar;—but I deny that any man can be a safe and reliable physician, to say nothing of skill, who is not well informed in the great principles of his profession—and who has not a mind of sound and discriminating character, capable of drawing correct conclusions from difficult and conflicting premises.

And here again we may finally institute a comparison of the *relative difficulties* of the medical and legal professions. The law cannot be termed one of the exact sciences—indeed its "*glorious uncertainty*" has become a proverb. Still in the *perfection* of its practice, it is more *exact* and *certain* than that of medicine.

It is governed by certain great and well defined *principles* or statutes, and its votary, if of discriminating mind and retentive memory, can go far to determine its powers and extent in any case. In its detail of practice, its rules are defined with sufficient clearness for the comprehension of ordinary minds. It has

its forms of process,—and its somewhat intricate pleadings, which however, if misunderstood, may generally be corrected before the error becomes utterly fatal to justice.

On the other hand, in the practice of medicine, every thing is submitted in more or less uncertainty to the judgment and skill of the practitioner,—and without, in every case, having well defined land marks for his guidance.

The Doctor is called on to judge of the *type* of disease, as we say,—of the character of the constitution and temperament of patient;—of the amount of excitement or exhaustion;—of the state of the blood,—the blood-vessels and the nerves—the condition of the organs;—of the prevailing epidemic and constitutional atmospherical predispositions &c., &c.,—and all this, *and much more*, without *rules* that can be said to be absolutely fixed and defined,—and involving constantly great delicacy of judgment and refinement of taste.

How can skill be exercised in such cases without a sound and discriminating mind—and a mind too that is well stored with a comprehensive knowledge of the principles that govern in each and every difficulty that arises.

No, gentlemen, no man can in the nature of things be a safe and reliable physician in all cases that may occur to him, without the qualifications that are derived from education and observation. Hence the importance of disseminating the observations and practical experience of our medical brethren—thus making them the common property of every member of the profession.

Medical associations greatly facilitate this end by bringing physicians together to detail their experience to each other—and to incite each to more careful observation in their professional pursuits.

In conclusion, gentlemen, allow me to express the hope that it may be your pleasure to unite in a common purpose to form an association which may stand as a medium of conferring large and lasting benefits, not only upon ourselves individually, but upon East Tennessee and the country at large.

Substance of Remarks by Dr. Samuel Pride, of Maryville, to strike out the words "Rogersville, Jonesborough, Athens and Cleveland," and insert "Knoxville," as the permanent place of of meeting of the Medical Society.

Mr. PRESIDENT: I regret to say that the arguments of the gentleman who has just taken his seat, have failed in convincing me either of the propriety or good policy of adopting the resolution. The abstract question of providing for quarterly sessions of the society I do not mean to controvert; and that it should be done now, and constitute part of our organization is also proper and right. But it is to the migratory feature of those meetings, proposed in the resolution, to which I most seriously object. I am fully aware that the gentleman's motives are good; and that in his estimation it will secure a much larger aggregation of interest and influence in behalf of our society, than upon a different plan; but in this I think he is mistaken, and that the very reverse of this we should find to take place. The old and trite adage, that a "rolling stone gathers no moss," may not be considered inappropriate in reference to the proposition now before us. Doubtless a reference to the records of our old or former organization would verify this fact, and show that a similar feature, may have had much to do with its failure and final dissolution.

To give success and permanency to a society of the character we are now attempting to form, you should see that not only its organic law and police regulations are clearly defined and appropriately regulated, but you should also give to it a permanent habitation. That location should be at such point as will best secure all the advantageous attractions that are necessary for success. Can these be secured to the desired extent at any of the points designated? I know the object to be attained is to enlist the members of the medical profession throughout the different sections of the country to the greatest possible extent in its behalf, and thereby secure their attendance upon its meetings. But with this vagrant character attached, and made a point of its regulations, is it reasonable to suppose, that your meetings when held

at one of the points in one extreme of East Tennessee will be attended by its members from the other extreme, and vice versa; or is it probable that its officers, which should always be present with your records, &c., will find it convenient or practicable to give their attendance. More than this, it may be that in the absence of any extensive means of public conveyance, many gentleman would be deterred by consumption of time, toil and expense of getting to and from those points; and further it is not likely that at any of these points there will ever exist any of those peculiar professional attractions that would operate as additional incentives to their attendance. But why limit the places of meeting to the four points indicated, or in other words, why make invidious distinctions in favor of those places? Is it not reasonable to suppose that my friends here from Sevier or from Blount, and in fact the gentlemen of the profession from every county seat intended to be embraced in the sphere of our society's operations would not with equal plausibility claim for their respective localities a like notoriety?

Alternate the quarterly meetings of your society as you may, you diminish its energy and paralyze its efficiency in a corresponding ratio. To make your meetings commend themselves to every section and to all interests, you should locate them, like your annual meetings at such a point as will be most likely to give interest, profit and importance to their proceedings.

Your annual meetings you have very properly located at Knoxville, as a central point to all East Tennessee. The public improvements that are already made and that are in process of construction to and from it will make it still more centrally accessible from the extremes. From these considerations, already, Knoxville is growing into a place of considerable commercial importance, and it is to this point that attractions from abroad, either of business, of pleasure or curiosity are invited, and may we not thereupon reasonably hope that it will at no distant day be the boast of every East Tennessean.

I am fully aware sir, of the fact that has been casually alluded to by the gentleman, that strong prejudices have, and do still exist in the minds of many, against Knoxville. And while I be-

lieve your city may, to some extent have merited this prejudice, yet I am not inclined to the opinion that it exists to the extent supposed, or that it may not often be without foundation. But to whatever extent they may have reached, I must be permitted to say that in them I never have participated, and hope a more liberalized sentiment will never suffer any one to indulge in them.

Every considerable extent of civilized country must in the very nature of things have its points of importance; and it is equally necessary that our fertile soil, our mineral resources, our mercantile interests and our growing industry and intelligence should have some point of centralized attraction. Circumstances have made Knoxville this point, to the balance of East Tennessee. Indeed sirs, this is true to such an extent, that a gentleman, now known to scientific and literary fame throughout the civilized world, and whose opinions are now regarded by the learned everywhere, as almost oracular upon all subjects that have engaged his attention, has recently declared it as his fixed opinion, that Knoxville will be regarded in the future as one of three of the most important central points in the United States. And if two great and important national highways, passing through it, and connecting it with the four cardinal and the intermediate points of the Union, can make it so, such will undoubtedly be the fact. At such a result every intelligent East Tennessean, not blinded by prejudice and bigotry, would rejoice.

Such being within the range of probability, what may we as a medical society not reasonably expect. Medicine like everything else, of a public nature, must now have its points of attraction. There are certain things necessary to distinction in our profession, that are only attained at prominent positions. The larger towns and cities can best furnish the elements for the attainment of this end.

Already, sir, I am pleased to learn that you have it in contemplation to erect here, as soon as the means can be obtained, the East Tennessee Hospital, upon an extensive scale, the design of which is on exhibition in one of the book stores of your city, for the erection of which I understand you have obtained subscriptions to a handsome amount. This, as its name imports, is designed to supply not only the increasing demands of your own

isolated working population, but to a certain extent the wants of the whole country. To this we may reasonably expect to see added, whenever your wants shall require it, an Infirmary for the accommodation of another class of inmates. Accompanying these will be attached rooms, fixtures and appliances for the convenience and comfort of the sick in the best and most approved manner, for dispensaries, dissection, post-mortem examinations and museums, where will accumulate, from different points, interesting specimens of morbid anatomy, to interest your members by the illustrations and elucidations they may afford of the semiology of the disease. A library of rare books, charts and maps may be expected here to be collected by which to impart to the patient inquirer after knowledge, that varied and extensive information and intelligence in his profession, which it is difficult to obtain in our ordinary private libraries.

Now, sir, with such facilities and advantages in favor of Knoxville, and the picture is not high wrought nor improbable, may we not suppose any intelligent physician who may become a member of your society, when he is about to set out from home to attend its meetings, would much prefer visiting this central point of medical attraction, when with yourself, sir, or some of your worthy colleagues at his side he could pass up and down your various sick wards, and contemplate at a glance almost the entire nosology of disease, and contrast, and analyze their various forms, phases, and modifications; and study with advantage, profit and pleasure their complicated morbid phenomena. Yes, sir, with prospective advantages, such as I have imperfectly alluded to, you insure a full attendance of the medical profession, such as will give interest and profit, not only to your annual, but your quarterly meetings also; where our older practitioners as well as the junior novitiate would delight to tarry for a time; and from whence all would depart with renewed vigor and stronger impulses for the pursuits of knowledge, and more exalted aspirations to emulate the dignity of their noble profession.

For these reasons Mr. President, and others that might be enumerated I now renew my motion to strike out of the resolution the words "Rogersville, Jonesborough, Athens and Cleveland," and insert in lieu thereof the word "Knoxville."

CODE OF ETHICS OF THE AMERICAN MEDICAL ASSOCIATION. ADOPTED MAY, 1847.

CHAPTER I.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ARTICLE I.

Duties of Physicians to their Patients.

1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. Those obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health and the lives of those committed to their charge, depend on their skill, attention and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect and confidence.

2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by him except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under

certain circumstances, been protected in their observance of secrecy by courts of justice.

3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease, to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when exercised by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For, the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquility of the most resigned in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is therefore a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty, which is independent of, and far superior to, all pecuniary consideration.

6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of various conduct, ought never to be neglected. His councils, or even remonstrances, will give satisfaction, not offence, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ARTICLE II.

Obligations of Patients to their Physicians.

1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties towards the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require, that their patients should entertain a just sense of the duties which they owe to their medical attendants.

2. The first duty of a patient is, to select as his medical adviser one who has received a regular professional education. In no trade or occupation, do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should also, confide the care of himself and family, as much as possible, to one physician, for a medical man who has become acquainted with the peculiarities of constitution, habits and predispositions, of those he attends, is more likely to be successful in his treatment, than one who does not possess that knowledge.

A patient who has thus selected his physician, should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It

is of still more importance that he should apply for assistance in the forming stage of violent diseases: it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

6. The obedience of a patient to the prescriptions of a physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness, to influence their attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded and the consequence, but too often, is a relapse. Patients should never allow themselves

to be persuaded to take any medicine whatever, that may be recommended to them by the self-constituted doctors and doctresses, who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of the interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disasterous results.

8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reason for so doing.

9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

10. The patient should after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for those are of such character, that no mere pecuniary acknowledgment can repay or cancel them.

CHAPTER II.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

ARTICLE I.

Duties for the support of Professional character.

1. Every individual, on entering the profession, as he becomes thereby entitled to all privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty, as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors brought it to the elevated condition in which he finds it.

2. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence, is a duty every physician owes alike to his profession, and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow creature.

3. It is derogatory to the dignity of the profession, to resort to public advertisements or private cards or handbills, inviting the attention of individuals affected with peculiar disease—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints,

or suffer such publications to be made—to invite laymen to be present at operations—to boast of cures and remedies—to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

4. Equally derogatory to professional character is it, for a physician to hold a patent for any surgical instrument, or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or others. For if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality: and, if mystery alone give it value and importance, such craft implies either disgraceful ignorance, or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ARTICLE II.

Professional Services of Physicians to each other.

1. All practitioners of medicine, their wives, and their children, while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously, as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But if a distant member of the faculty, whose services are affluent, request attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed which the party receiving it would wish not to incur.

ARTICLE III.

Of the Duties of Physicians as respects vicarious offices.

1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and request some of his professional brethren to officiate for him. Compliance with his request is an act of courtesy which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of its fraternal courtesy, without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ARTICLE IV.

Of the Duties of Physicians in regard to consultations.

1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a licence to practice from some medical board of known and acknowledged respectability, recognized by this association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumu-

lated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry.

2. In consultations, no rivalship or jealousy should be indulged; candor, probity, and all due respect should be exercised towards the physician having charge of the case.

3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such farther enquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending; and by their common consent; and no *opinions* or *prognostications* should be delivered, which are not the result of previous deliberation and concurrence.

4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment, as any subsequent unexpected change in the character of the case may demand. But such variation and the reasons for it ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him, at the next consultation.

5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties,

the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case, he may examine the patient, and give his opinion in *writing*, and *under seal*, to be delivered to his associate.

6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate, that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants,—they must equally share the credit of success as well as the blame of failure.

8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen, that two physicians cannot agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire, and if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further

deliberation in the consultation, or participation in the management of the case.

9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases, should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out, which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities, which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ARTICLE V.

Duties of Physicians in cases of interference.

1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

2. A physician, in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made; no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

3. The same circumspection and reserve should be observed, when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of an-

other practitioner. Indeed, such visits should be avoided, except under peculiar circumstances, and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

4. A physician ought not to take charge of, or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case or been regularly notified that his services are no longer desired. Under such circumstances no unjust and liberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens, that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

6. It often happens, in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates, should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no farther than is absolutely necessary with the general plan of treatment; to assume no future direction, unless it be expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficient one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with, which might justly be claimed.

10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ARTICLE VI.

Of differences between Physicians.

1. Diversity of opinion, and opposition of interest, may, in the medical, as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians, or a *court-medical.*

As peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exists numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by a general society, neither the subject matter of such differences nor the adjudication of the arbitrators should be made

public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ARTICLE VII

Of pecuniary acknowledgments.

1. Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

CHAPTER III.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ARTICLE I.

Duties of the Profession to the public.

1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens: they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiène, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations, —the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions,—in relation to the medical police towns, as drainage, ventilation, &c.,—and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice, on subjects strictly medical,—such as involve questions relating to sanity, legitimacy, murder by poisonous or other violent means, and in regard to the various

other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a post-mortem examination, it is just, in consequence of the time, labor and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

3. There is no profession, by the members of which, eleemosynary services are more liberally dispensed, than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain public duties referred to in section 1 of this chapter, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

4. It is the duty of physicians, who are frequent witnesses of enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ARTICLE II.

Obligations of the public to Physicians.

1. The benefits accruing to the public directly and indirectly from the active and unwearied beneficence of the profession, are

so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism,—to afford every encouragement and facility for the acquisition of medical education,—and no longer to allow the statute books to exhibit the anomaly of exacting knowledge from physicians, under liability to heavy penalties, and making them obnoxious to punishment for resorting to the only means of obtaining it.

CONSTITUTION AND BY-LAWS OF THE EAST TENNESSEE MEDICAL SOCIETY.

We the undersigned practicing Physicians of East Tennessee, anxious to promote our mutual improvement in the Science of Medicine, and to elevate the standard of professional attainments, do form ourselves, and such as hereafter may associate themselves with us, into a Society, and do adopt for its government the following

CONSTITUTION.

ARTICLE I.

This Society shall be called "The Medical Society of East Tennessee."

ARTICLE II.

The officers of this Society shall be a President, two Vice-Presidents, a Recording Secretary, a Corresponding Secretary, and a Treasurer, to be chosen annually by ballot, and to perform such duties as may be assigned hereafter in the By-Laws of the Society.

ARTICLE III.

Any Mediciner of good character and respectable medical attainments, known as such to the members of the Society, and who has been heretofore recognized as a member of the East Tennessee Medical Society, or has complied with the spirit and letter of the Charter of the Medical Society of Tennessee, and

who in every particular comports himself with the Ethics of this Society, may become a member on signing the Constitution and complying with forms and usages in accordance with the By-Laws.

ARTICLE IV.

The Secretary shall furnish every individual upon becoming a member of this Society, a *certificate* of such form and style as the Officers of the Society shall direct.

ARTICLE V.

It shall be the privilege of each member of the Society, on removal or withdrawal from the Society, to obtain a *letter* of *dismission*, signed by the Secretary.

ARTICLE VI.

Any *five* members will constitute a quorum to do business.

ARTICLE VII.

The Society shall have the power of imposing such fines, and levy such taxes as a majority of the members may deem necessary.

ARTICLE VIII.

This Constitution may be altered or amended at any regular meeting, by a vote of two-thirds of its members.

BY-LAWS.

ARTICLE I.

The President shall take the chair and preside over all meetings of the Society, see that order and due decorum be observed in the transaction of business, observing Parliamentary usages in debate.

It shall be his duty to give fair and ample scope to discussion, but so as to expedite the conclusion and take the vote, announce results, and to fine disorderly members according to the laws of the Society.

ARTICLE II.

In the absence of the President, his duties shall devolve on

one of the Vice-Presidents, and in case of their absence, the senior member shall preside.

ARTICLE III.

It shall be the duty of the Recording Secretary, to record all the proceedings of the Society in a book kept for that purpose.

ARTICLE IV.

The Corresponding Secretary shall conduct the correspondence of the Society, read all letters and papers that may be communicated to it, and transcribe in a book such of them as the Society may choose to preserve.

ARTICLE V.

The Treasurer shall collect all moneys arising from fines, admission of members, receive all donations of money or books, and disburse the same as the Society may direct.

ARTICLE VI.

Each member is expected to prepare for the Society, at least annually, a dissertation on some subject connected with medicine, or report a case or cases which have occurred in practice, and for the purpose of encouraging the same, the Society will offer a prize medal to be awarded by a competent and impartial committee, to the author of the best *Essay* on some subject, designated by the Society at its previous meeting, the author to accompany his *Essay* with a sealed paper containing his name, which shall not be opened until the award is made in his favor and in other Essays only by consent of the author.

ARTICLE VII.

All papers that are read are to be considered the property of the Society, and at their disposal.

ARTICLE VIII.

All motions and resolutions shall be presented in writing.

ARTICLE II.—CASE OF ACUTE ENTERITIS.

BY DR. J. E. THOMPSON, OF BUTLER, MO.

November 21*st*, 1855. Mr. S——, age 18, of weak constitution and bilious habits, was attacked with the usual symptoms of Enteritis.

About 11 o'clock, P.M., his symptoms became more urgent, but was soon quieted by a little cordial given by his mother. On the morning of the 22nd, the vomiting returned with considerable violence; a messenger was dispatched for me, but my being absent on professional business, Dr. Meng was called in, and found the patient as follows: Pulse 120—small; skin purple and hot; countenance anxious; abdomen tender on pressure, with excessive pain, and twisting of the body; bowels constipated and urine scanty; stomach irritable, rejecting everything of a fluid nature taken into it; thirst excessive, with a dry tongue, and a dark coat upon it; respiration thoracic. Gave at 7, A.M. the following:

℞. Hydrarg. sub. mur. grs. 20.
Pulvis opii. grs. 2.

M. Given in syrup, to be followed in one hour by an ounce of castor oil, and if no action in two hours, to be repeated; also,

℞. Pil. hydrarg. grs. 8.
Pulv. opii. grs. 4.
" camph. grs. 8.

M. To be divided into 4 pills—one to be taken every two hours, beginning at 10 o'clock, A.M.

Abdomen to be bathed with liniments and warm fomentations.

5 o'clock, P. M. Had no alvine discharge; pulse 150—remitting, small and thready; thirst excessive; skin purple and extremities cold; countenance haggard; bowels tumid and tympanic, and tender on pressure; pain excessive—tosses body to and fro; respiration thoracic. Gave

℞. Hydrarg. sub. mur. grs. 30.
Ol. tiglii. grs. 2.

M. Given in syrup; bowels to be bathed with liniment.

6, P.M. I arrived; found the patient as follows: Pulse imperceptible; body purple, extremities cold and flesh shrunken; countenance ghastly; respiration difficult and hurried; abdomen tumid and tympanitic, with three dark spots the size of a half dollar near the umbilicus; urine retained; thirst very great—a continual cry for "cold water," which was ejected as soon as swallowed, accompanied by a kind of liquid fæces, with fits of retching after the stomach became empty, ordered

℞. *No more cold water;* body to be washed with warm camphor, with sinapisms to the epigastrium, wrists and ankles, and the following enemata:

℞. Ol. ricini. f℥2.
Sodii. chlori. ʒ4.
Aqua (hot) 1 pt.

This, however was not retained, and another was given.

7, P.M. Has ejected the enemata by the mouth, having retained it some twenty minutes. Symptoms growing worse, at half-past seven ordered ℞. ol. tiglii. gtts. 4. All was to no purpose; he died fifteen minutes before eight o'clock, P.M.

His strength failed but little, being able to help himself up and down—in fact, he was upon his feet greater part of the time, till he was told that he must die, when he soon became speechless, but retained his senses till the last. Every thing given him, for the last four hours, was ejected. He ate on the 21st several raw turnips; at noon, dined heartily on cabbage and strong coffee: he was not noticed to have complained till the evening of the 21st, when he complained of "cramp" in the bowels and fullness of the stomach. The pains were unremitting throughout the whole period of the attack, and, to all appearance, of the most excruciating character. The difficulty in this case was, that it was called "colic and cholera morbus," and treated as such throughout the beginning of the attack—indeed, till the patient was beyond the reach of medicine.

Dr. Watson says in his practice of physic p. 784, that "it is of much practical importance to discriminate between enteritis and the disorders that resemble it; and particularly to distinguish it from colic. When it commences, as it sometimes does, with

distinct rigors, and is attended by hot skin, thirst, and a hard and frequent pulse, there is no room for doubt. But it often begins insidiously with mere colicky symptoms; the pain at first is not much augmented, it may be even somewhat eased by steady pressure. If we mistake colic for enteritis, the error is of no great moment; but the opposite mistake *which is more common, may be fatal.* * * * * * * * *

Some of the remedies of mere colic are, however, highly dangerous when there is inflammation of the bowels."

In this case, the skin was hot until about four hours before death; the pulse was quick and hard from the outset, and the bowels tender on pressure. Dr. Meng may have been misled from a knowledge of the fact that the patient had frequent spells of colic, which were relieved by vomiting, during the last few years; but in no case before, had such incessant excruciating pain been present. It was argued that there was a "mechanical obstruction in the tube" from the fact that 6 gtts. ol. tiglii had been given to no purpose. "Such a phenomenon" says Dr. Watson, "(of clysters, introduced into the rectum, having been voided through the mouth,) would show that the whole tube was pervious; that there was no mechanical obstruction." Ibid. p. 785.

The first enema was ejected per rectum as soon as given; the second was retained some twenty minutes, when a substance identical to it, was thrown off the stomach, followed by a quantity of liquid feces of the same character that is found in the intestines after death. Hence, it is conclusive that there was no mechanical occlusion of the intestinal tube in this case. "One point in the management of enteritis requiring great caution and judgment, relates to the exhibition of purgative medicines. The costive state of the bowels is apt to be looked upon as the main evil, and their evacuation as the chief indication of treatmeat, but great mischief, I apprehend, is likely to arise from the exclusive pursuit of that indication. * * * * * * * Purgatives given by the mouth are often rejected by the stomach with great distress to the patient. If they are retained, and fail to operate, they must do more harm than good. Certainly they should not

precede the venesection. * * * * * *
And I am persuaded that when evacuations follow the administration of purgatives in such cases, they are often owing to the blood-letting and other antiphlogistic measures that are employed at the same time." Ibid. p. 787.

Dr. Abercrombie says: "I confess my own impression to be, that the use of purgatives makes no part of the treatment of the early stages of enteritis; on the contrary, that they are likely to be hurtful until the inflammation has been subdued."

Dr. Eberle says: "Copious depletion in the early stage.—Drastic purgatives are improper—mild purgatives very useful." From the testimony of these great men, and also of experience, we adduce the fact that *purgatives are improper in the first stage of enteritis.* The chief indication is to subdue the inflammation in the bowel; the remedial agents which answer this are *opium and venesection.*

The *cause* of the disease in this case was no doubt the eating of the turnips and cabbage, and exposure to a cold rain immediately afterwards, the digestive organs, being inactive and heavily taxed, received a more copious supply of blood, deeply seating the inflammation in the peritoneal coat of the intestines. For several months his bowels had been more or less constipated, a diarrhœa of a watery character intervening, accompanied by a morbid appetite which was indulged ad infinitum. Death took place in the way of asthenia, beginning at the heart.

December 1*st*, 1855.

FOREIGN CORRESPONDENCE.

ARTICLE III.—MEDICAL INSTITUTIONS OF EUROPE.

BY J. W. GRAY, M.D., OF NASHVILLE, TENNESSEE, TO DR. W. P. JONES.

(Continued from Vol. III, page 419.)

PARIS, Sept. 1st, 1855.

The School of Medicine being the greatest seat of the *Faculty of Medicine* in the Academy of Paris, I propose in this letter to give it such a notice as my fragments of leisure will permit.

From most authentic statistics, it appears that Medical Schools have existed in the city for nearly four hundred years, the first buildings for that purpose having been erected in the year 1472. Instructions had been given here during a period of one hundred and forty years, when an amphitheatre was constructed for the study of anatomy, in which demonstrations were carried on for fifty eight years. Then the faculty removed to an edifice, long occupied by the faculty of law, at which time the faculty of medicine and the schools of surgery united and began their consolidated operations at what was termed the new schools of surgery. This splendid embodiment, as it now exists, is comprised of twenty-six professors, appointed by the government, and each one receives a specified salary, which varies according to his rank, from four hundred dollars to two thousand per session. The head or dean of the faculty is elected only once in five years, and the power is invested in him to balance the expenses, convoke the faculty and appoint the committees, as well as suspend a course of lectures if he regard it good policy.

The foundation stone of the present buildings was laid by Louis XV., about one hundred years ago, on the site of the ancient *College de Bourgoyne*, but owing to some cause, not recorded, the inauguration did not take place until the elapse of seven years; we may conjecture however, that a structure so large may have required seven years in its completion, whereas in this advanced period the work might have been finished in a single twelvemonth. The building extends along the street nearly two hundred feet. We entered by a grand arch, from both sides of which proceed-

ed a double range of stately Ionic columns, forming a handsome portico, and upon the arch we noticed a bas-relief of the founder whose name we have just mentioned, and let his merits be what they may, as a king and ruler, he will long be kindly remembered by the world; for to whom on earth could we pay higher reverence than to him who lends a helping hand to the healing art. Wisdom and beneficence are also represented on this arch as granting privileges to the schools of surgery, and the genius of the arts presenting to the king a plan of the edifice. Having passed through the arch, we entered what is termed the rectangular court, at the bottom of which we perceived six corinthian columns, based upon steps and surmounted by a pediment. This bas-relief presented us with a representation of theory and practice, joining hands over an altar, as it were a groom with his bride in beauty's bloom, declaring to each other their eternal allegiance. Along the frieze, the eye was met by a rapid successions of medallions with the portraits in bas-relief of Pitard de la Peyronnie, Pare, Marechal, Petit, etc. By this route we entered the Amphitheatre, which is much larger than that of the *Hotel Dieu.* It is a semi-circle with a well arranged sky-light, and contains a monochrone fresco by Gibelin, dated 1775, and designed to illustrate the utility of medical science. The lectures here are all free of charge to the student, and the subjects run as follows: Anatomy, Pathological Anatomy, Physiology, Hygienic Medicine, Pharmacy, and organic Chemistry, Medical Pathology, Surgical operations, and bandages, Medical Jurisprudence, General Pathology and Therapeutics, a chair filled by the learned Andral. Next comes Therapeutics and Materia Medica, Medical Natural History, Clinical Surgery, from which chair we may hear the still audible voice of the distinguished and venerable Velpeau, not yet reduced by age and infirmity to an indistinct whisper. He is also the head surgeon at the Charity Hospital.

Clinical Medicine, Clinical Obstetrics, and diseases of females and children, finish the list of chairs and exhaust the hurried notes made on the first visit.

On our second visit, we entered by the same noble arch as before, and passed along the portico which led us to the grand stair-

case on the left, and here we paused before the well known statue of the famous Breschet, who is represented as counting the pulsations of a youth, so life-like that we imagine we can see the heart throb even in the cold marble against the ear, and the pulse beat against the fingers of the great physician. From thence we hurried up the broad flight of steps and turning into a room, we found ourself in the midst of a library composed of thirty thousand volumes. We wandered for a time amid this interesting multitude of books, reading as we advanced, on the title-page of many, the names of our fathers in science, who labored centuries ago, and of those who wrote but yesterday. Returning to the top of the staircase we entered the museum of comparative anatomy, and here the professional man is at once struck with wonder at the manner in which the genius of the artists have left the traces, nay, bold delineations of their ingenuity stamped in visible characters on the grand group of preparations before him.

The first room is illuminated by sky-lights, and embraces the entire extent of the attic, over the above mentioned portico. There is a handsome gallery on either hand which may be reached by a spiral staircase, rising from the centre of the room. Two rectangular railings enclose a space along the middle, in which are well arranged skeletons of the larger animals, among which are standing the strong, bleached bones of the lion, from the burning sands of Africa. Commencing our examination on the right of the room below, we halted before those splendid preparations due to the skillful hand of M. Denonvilliers, and from which we received ideas of the great nervous arrangement, of the clearest nature. The detailed exposition of the fifth pair of nerves in the human head is so well executed as to make one feel, as he beholds its beautiful construction, as if there could be no art about it, or if so, that it was put there by some such skill as that of the little busy bee, the greatest mechanic the world has yet known, and while this brings us back into such close proximity with the works of nature and of nature's God, it also reminds us of the fact that there is a point beyond which human art cannot advance. The artist could make the man, but could not put breath into his body.

Knowing that we should have frequent opportunities of exam-

ining this prodigy of art, we left so delightful a scene, and turned to those preparations which expose the muscular system of the mammifera, and then came the ostiology of a thousand reptiles and birds, followed by a splendid group of phrenological specimens, consisting in a great measure of the heads of animals. It is in this collection we find the head of the famous Fieschi, the inventor of the *Infernal Machine*, which was discharged on the 28th of July 1835, with a view to dispatch Louis Philippe, while passing along the Boulevards at the head of his staff, and by which Marshal Martier, Colonel Ricussec and others were killed. The fractures which Fieschi received from his own curious *fusil*, are beautifully displayed. The osteology of the human skull is admirably shown by a combination of springs which hold the sutures asunder so as to leave no difficulty in distinguishing them. Though we are not confirmed believers in phrenology as an established science, we examined with much interest the celebrated preparations, for its illustration, by Dr. Dumontier, which have recently been contributed to the collection, and then proceeded to the cases which contain the series of angiological specimens, injected, and the general classification of which is according to the system of Mandi. Thus terminating our round on the lower floor, we ascended to the gallery, took a cursory view of the numerous specimens of embryology, examined the eye, the organs of taste and smell, and proceeded to two gilt frames which enclose some superior dissections of the acoustic organ of the smaller mammalia, due to the practiced hand and unwearing patience of Mr. Hyrlt of Vienna. On this floor are to be seen a number of preparations, made by injections with mercury, to display the lymphatic system. Among the skeletons of insects that of the *Scarabæus Melolontha* is the most remarkable, consisting, as it does, of seventy-seven pieces.

In the third room, among a multitude of objects belonging to natural history, is to be seen a model in wax of the celebrated dwarf *Bebe*, who, it appears, was only 20 inches high, and in the fourth we saw six presses filled with anatomical and surgical instruments, and one made especially famous by its containing the case of instruments used for the autopsy of Napoleon the grand.

(*To be continued.*)

BIBLIOGRAPHICAL NOTICES.

ARTICLE IV.—*The Pathology and Treatment of Leucorrhœa.* By W. Tyler Smith, M.D. Philadelphia: Blanchard and Lea. 1855. (From the Publishers, through W. T. Berry & Co., Nashville.)

Tyler Smith on Leucorrhœa, is the title of a book just issued from the prolific press of those enterprising publishers, Blanchard & Lea, Philadelphia, and is gotten up in the usual happy style.

We hail, with pleasure, the appearance of "another Richmond" in this field of scientific controversy. Until the publication of Bennett's great work, the peculiar and interesting class of disease of which it treats, was shamefully neglected by the professors, but with the speculum, pouring the light of his enthusiasm upon "sufferings where modesty has ever sought to veil,"—there came a reaction which threatened to overrun the opinions and prospects of the past. The *speculum* was to be found in the hands of every tyro, and the hitherto occult os and cervix were unceremoniously brought to light and ruthlessly cauterized for ulcerations, real or imaginary.

That the inflammation and ulceration to which this new-born enthusiasm ascribed all the aberrations of the female genitalia, existed for the most part in the speculum of a distorted vision, is now made clear by Dr. Smith, who assures us that *ulceration* is comparatively infrequent, and that the pathological condition for which it is so often mistaken, is nothing more than elevated papilla denuded of their epithelium.

The first chapters are devoted to a clear and minute expose of the anatomy and physiology of the female genitalia. We are assured that the vagina, cervix and os uteri are lined by a continuation of the skin, and is covered with epithelium, that its secretions, like the skin, are acid, and that it may be the seat of any of the dermoid eruptive affections,—that the canal of the cervix is lined with true mucous membrane, arranged in columnar folds, upon which is displayed the numerous ducts of the

muciparous glands of the cervix, indeed he regards the cervix as an open gland, whose duty it is to secrete the tough, alkaline mucous which is most abundantly found lubricating the parts during labor, but ordinarily this gland is only called upon to act periodically, to restore the plug which usually closes the canal of the cervix, and which has been washed away by the menstrual flows, —but under the stimulus of irritation, it pours out a continuous stream of muco purulent matter, which, from its increased alkalinity, irritates, and ultimately abrades the os and cervix, and it is this abrasion which is so constantly mistaken for ulceration. Thus, in the opinion of our author, leucorrhœa is the cause of the phenomena in question, and not the effect, as has been supposed by Bennett and others.

The chapter devoted to syphilitic leucorrhœa should be carefully treasured by every practitioner, for how often are the fatal effects of this disease overlooked in its mysterious transmission from parent to child and child to parent. We are assured that the syphilitic taint may slumber for years in the system of the father, without giving any indications of its presence; but the ovum impregnated by him, will become actively syphilitised, and through it, the mother, hitherto healthy, will become the victim of secondary syphilis, which finds expression in frequent abortion, intractible leucorrhœa, &c. This leprous moral and physical taint is not confined to the degraded, but unhappily finds its way into all ranks of society. Hence its importance, in the language of Dr. Smith. "I am persuaded that far too little importance has hitherto been given to the connexion between constitutional or secondary syphilis, and obstinate leucorrhœa, with the disease of os and cervix uteri. It is satisfactorily proved that genuine chancre is rare upon the os uteri, but that, in secondary and tertiary syphilis, leucorrhœa is very common. These facts are well ascertained, but the mode in which the morbid state of the os and cervix uteri, and the accompanying leucorrhœa, are produced, has not been satisfactorily investigated." * * * "It is not very uncommon to see cases in which men have had syphilis a few years before marriage, convey secondary syphilis to their wives through the medium of the ovum. There is, of

course, in such cases a great disinclination to attribute any disorder to a syphilitic taint. In many instances of this kind, I have seen syphilitic leucorrhœa resist all the usual remedies, or if cured by the ordinary means, return again after the disuse of treatment. In some of these cases the leucorrhœal symptoms have been almost the only signs of syphilitic disease in the mothers, though the nature of the disorder was generally made evident by the presence of syphilitic eruptions upon the children to whom such women have given birth, and by the previous history of the father; sometime, however, the children are still born, and do not present any signs of syphilis, or abortions take place in the early months." * * * * * * * *

"We cannot wonder that in such cases the mother becomes diseased, for by means of the fœtal circulation, the blood of the male parent is brought almost as directly into contact with the female as though a tube was placed between the vessels of the two parties, and the circulating fluid allowed to interfuse."

* * * * "When the mother is once affected, and no treatment is resorted to by the husband, a fresh dose of the secondary poison is imparted at each pregnancy. As regards the length of time after an attack of primary syphilis, during which a man may beget a diseased ovum, it is difficult to give a positive opinion. It is more a matter of temperament and constitution, than of years. Some habits throw off the syphilitic poison readily, and to all appearance completely; others retain it for a long course of time. It adheres, *ceteris paribus*, less tenaciously to the constitution of youth, than when the disease has been contracted during mature manhood."

* * * * "The appearances presented by secondary, syphilitic leucorrhœa do not differ materially from the appearances presented in other severe cases of leucorrhœa. It is this circumstance which has probably led to its doubtful recognition as a form of secondary syphilitic disorder. Its chief characteristics are, its existence in connection with frequent abortions, and with other secondary symptoms, and the difficulty experienced in the case, except by anti-syphilitic remedies. In the secondary leucorrhœa, the cervex uteri is generally soft, swollen, in-

jected, and entirely denuded of epithelium. It hangs loosely in the vagina, and from the weakening of the vaginal walls. Eruptions are often met with in the upper part of the vagina, and upon the external portion of the cervix. The os uteri often gapes so as to exhibit the rugae of the lower part of the cervix, and a thin yellow purulent matter, which, when mixed with the morbid secretions from the cervical canal, looks something like honey or honey and water, exudes in considerable quantity from the lower part of the uterus. Occasionally, watery growths are found upon the os uteri, and the vesicles of Naboth are sometimes found at the os uteri.

Another interesting fact in connexion with this subject, is, that secondary syphilis is incommunicable except through the medium of the ovum,—the opinion having very generally obtained that it could be imparted directly from the male to female and from nurse to child and vice versa. Dr. Smith has instituted a series of experiments which conclusively show its incorrectness.

On the application of caustics, we think the Doctor's views are very judicious, he declares his preference for solid nitrate of silver, and strongly reprehends the application of the destructive caustics, such as potassa fusa, acid nitrate of mercury, the actual cautery, &c., and furnishes some interesting cases in point, showing the hazard to be incurred by their use, in extensive destruction of the parts. He says:

"Such are some of the evils which follow the use of the more violent escharotics in the treatment of ordinary uterine disease. It may be asked, are there no positive advantages in their use, which outweigh the disadvantages of such accidents? In my opinion, there is no good which can be effected by the more powerful caustics, which cannot be accomplished by the nitrate of silver, or by other means. It is true that, by the prolonged application of nitrate of silver, loss of substance may be caused, but this is far less likely to occur with lunar caustic than with the more powerful escharotics. It is also true that some practitioners apply the more violent caustics so lightly that they do not exceed the milder medical action of the solid nitrate of silver, but in such cases, it would be quite as well to use the safer remedy when a caustic is required."

In opposition to the *inflammatory* doctrines of Bennett and others, our author takes the bold ground, that all uterine diseases with which leucorrhœa is associated, (except specific diseases,) on conditions of ability, and call for tonics in their treatment, he says: "As regards constitutional measures, the cases are comparatively *few*, in which a tonic treatment is not called for." We confess that we are not prepared to concede this proposition to the extent claimed; for we have often seen leucorrhœa in plethoric subjects yield more readily to a mild alterative and aperient course, with well regulated and unstimulating regimen, than to any other means, but as a general rule, it must be admitted that leucorrhœa is associated with general weakness and calls for supporting measures.

Of the tonics, the ferruginous preparations are preferred, and of these, the iron alum is most highly praised, when we desire to avail ourselves of a tonic and astringent combined. This is a new remedy, first introduced to the profession as a therapeutic remedy of value, by Dr. Smith, and if the half that is claimed for it be true, it should at once come into general use. There are two varieties, the potash iron alum, and the ammonia iron alum. The following are the formula for these preparations: dissolve peroxide of iron in sulphuric acid and add an equivalent of sulphate of potash, the solution with an excess of sulphuric acid, being evaporated until chrystals form, on cooling. The ammonia iron alum is formed by adding an equivalent of ammonia to the solution of the peroxide, instead of the potash, the latter is preferred, and may be given in doses of from 3 to 6 grains three times a day, in columbo water. It is alike useful in leucorrhœa and passive hemorrhage.

We would like to notice his remarks of pessaries, supporters, washes, and many other subjects of interest to the physician, but it would extend this article beyond proper limits; we therefore reluctantly take leave of our author, and cordially recommend his book to the favorable consideration of our professional brethren. T. A. A.

ARTICLE V.—*The Obstetric Memoirs and Contributions of James Y. Simpson, M.D., F.R.S.E., Prof. Midwifery in University, Edinburgh.* Edited by W. O. PRIESTLY, M.D., Edinburgh, and H. R. STORER, M.D., Boston. Vol. I.

To the publishers, J. B. Lippincott & Co., of Philadelphia, we are indebted for a copy of the foregoing valuable work of Dr. Simpson. These memoirs were originally offered as contributions to the British Journals of Medicine, and as they embody the experience of one of the most highly distinguished obstetricians of the present day, they have been collected and arranged by two of those who shared in his instruction. These memoirs "bear the impress of an almost unlimited practical knowledge and experience."

The junior editor, Dr. Storer, offers the following points as those advanced and maintained by Dr. Simpson. Some of these, it is true, have not yet received the full sanction of the profession, yet they are put forth by him in such strong language, and with such convincing arguments, that they court investigation. Dr. Storer says:

"In 1844, Dr. Simpson proposed in certain cases of placenta prævia, the extraction of the placenta before the child. In 1845, the use of alkaline salts in placental phthisis: in 1849, the operation of turning as an alternative for craniotomy.

And the same year the use of anæsthetics in labor." The profession well knows how these propositions have been received.

Again: "In 1843, Dr. Simpson proposed the sound in uterine diagnosis:

In the same year, the treatment of displacements by intra-uterine pessaries. In 1844, the incision of the cervix uteri in in obstructive dysmenorrhæa:

And in 1849, the employment of sponge tents to expose intra-uterine polypi."

To the elucidation of these important propositions, besides others, the pages of the volume before us are devoted.

These memoirs are arranged into three classes.

In part I, those pages which relate to the special pathology of the unimpregnated female are embraced. To enumerate each pathogical indication which came under the observation of the ob-

stetrician, would be to extend the limits of this notice too far, especially as we design, in future numbers, discussing certain points suggested by our author. To the question, what are the means of physical diagnosis that we may use in diseases of the uterus, ovaries? &c. There are four of the senses to be employed, touch, sight, hearing and smell. Our author reduces them to the following order.

"1. The external or abdominal examination of the patient by sight, touch, auscultation and percussion.

2. The tactile examination of the uterus, ovaries, &c., by the vagina or by the rectum.

3. That most important mode of diagnosis, viz: the simultaneous combination of the internal and external modes of tactile examination.

4. The use of the speculum.

5. The use of the uterine sound.

6. The use of the sponge tents, with the view of dilating the os uteri, so that the finger can be introduced into the cavity of the body of that organ.

7. The microscope and chemical examination of the discharges of the uterus and vagina.

8. The employment of the exploring needle in cases of fluid collections, in order to ascertain the contents of such collections.

9. The adoption of the anæsthetic agents, to relax the abdominal parietes, and enable us to practice the different modes of examination, in cases of excessive or neuralgic tenderness of the abdominal surface or vagina," &c.

Can any of our medical readers see in these nine means, one that he could dispense with in his investigations into uterine diseases? We may never be called upon to apply even a majority of them in the examination of any one case, but in the practice of a life-time, the assiduous physician finds frequent instances where one or more is brought to bear in his diagnosis of female diseases.

In fact, no one is justifiable in undertaking the treatment either of these or of any other diseases, unless he is fully satisfied in his own mind of the nature of that disease, and is able, if call-

ed upon to give clearly and satisfactorily a reason for the opinion which he entertains. The nature of female diseases can be made as plain as those of any other part of the system, and to work in the dark with reference to them, is as culpable as to pursue a similar course of treatment in the diseases of the bowels or chest.

Most generally, however, they are of that chronic character which gives time to the routine physician to try various modes of treatment so that happily he may hit upon one that will manifest itself as being adapted to the case.

But different from the routine practitioner is the scientific physician. His first inquiry is into the condition of his patient, thoroughly investigating his case by the light of all those symptoms which arise from derangement of the functions, whether they be local, or sympathetic, or constitutional, and still failing in these to ascertain, without the shadow of a doubt, the existence of uterine disease, and yet with his suspicions strongly aroused, he proceeds to a still more certain means of diagnosis, by which he is enabled to comprehend "all the ascertainable circumstances connected with the structure, density, form, and other anatomical conditions of the organ which he believes to be the primary seat of the disease."

True diagnosis is based upon two sets of symptoms, functional and physical. The two are employed in our diagnosis of diseases of the chest and bowels, and from the fact that they are not admissible in those of the brain and spinal marrow, arises their hidden character.

On this subject therefore, our author lays down the following propositions.

1st. *The general and local functional symptoms of disease of the uterus are such as enable us to generalize, without enabling us to specialize, the exact existing affection of the organ.*

2nd. *In almost all cases of diseases of the uterus, it is only by the physical examination of the organ itself that we can distinguish the precise nature of the existing affection, and fix its character, extent, &c.*

3rd. *The physical examination, as hitherto practised, seldom*

enables us to ascertain accurately the organic condition of more than the cervix and lower part of the body of the uterus.

4th. It is possible, by the use of a uterine sound or bougie introduced into the uterine cavity, to ascertain the exact position and direction of the body and functions of the organ—to bring these higher parts of the uterus, in most instances, within the reach of tactile examination, and ascertain various important circumstances regarding the os, cavity, lining membrane, and walls of the viscus.

In this part of the volume are also to be found a chapter on *medicated pessaries*, a mode of treatment which Dr. Simpson was in the habit of employing; as emollients, he used the zinc and lead ointments, mercury and iodine as discutients, tannin, alum and catechu as astringents, and opium and belladonna as anodynes.

These pessaries are composed of the medicine used, made into an ointment, and rendered consistent with yellow wax, one or two drachms to an ounce of the ointment. We subjoin a few of the formulæ, that our readers may understand their composition.

Tannin Pessaries. ℞. tannin ʒij, white wax ʒv, lard ʒvj. Mix thoroughly.

Zinc Pessary. ℞. oxide of zinc ʒj, white wax ʒi, lard ʒvj. Mix and divide into four pessaries.

Iodide of Lead Pessaries. ℞. iodide of lead ʒj, yellow wax ʒv, lard ʒvj. Mix.

In part II of this valuable volume, we are presented with the physiology and pathology of pregnancy. On page 314, our author has a short section on the treatment of hemorrhage in abortion, for which he recommends the introduction of a sponge tent, where abortion was inevitable and the hemorrhage great. He relied more upon it than upon the vaginal tampon. The use of this tent however presupposes the closure of the os uteri. But, according to our experience, we have never found the os uteri undilated in threatening abortion, especially in cases where hemorrhage had been great, and had continued for some time. In a case now under charge, in which conception has so recently taken place, that the patient attributed her very profuse hemorrhage to

excessive menstruation, when called in on the tenth day of the hemorrhage, we found the os uteri dilated fully two inches in diameter, and, after passing our finger through a clot of blood, which clogged up the os, and penetrating to the fundus, the detached embryo with its secundines were removed, and the uterus firmly contracted and arrested the hemorrhage. In the sickness and vomiting of pregnancy, our author has derived more speedy and direct beneficial effects from the oxalate of cerium than from any other remedy. He employed it in one grain pills.

Part III relates to natural and morbid parturition.

We recommend the book to the profession. (Through Rayl & Vanuxem, Knoxville.) R. O. C.

ARTICLE VI.—*Constitution of Organic Compounds.* By Prof. HENRY ERNI, *of University, Vt.*

Catalogue of University of Vermont, 1855--56.

This institution, in which Prof. Erni fills the chair of Chemistry, numbered during the past session 130 students.

The Essay of Prof. Erni, which gives a brief account of the different theories advanced respecting the constitution of organic compounds, is able and scientific. It evinces his familiarity with the rapid progress which is being made in this interesting field of chemical inquiry. Whilst inorganic chemistry recognizes sixty-two elementary or simple bodies, variously associated together, organic chemistry relates to objects which consist of only four principal elements—carbon, oxygen, hydrogen and nitrogen—yet these four are associated in so many different combinations as to constitute the thousand and one products which are embraced in the animal and vegetable kingdoms.

By analysis and synthesis, by composition and decomposition, we arrive at the nature of inorganic substances. But as a general rule we can avail ourselves only of analysis—the process of decomposing, for arriving at correct conclusions respecting organic products. The apple, for instance, can be shown to be composed of certain acids, and these can be resolved into their ultimate elements—but no chemical art has yet succeeded in

bringing together again these ultimate elements to form the proximate elements of the apple. We will recur to this subject in a review of Lehman's Physiological Chemistry, which we have on hand for the next number. R. O. C.

ARTICLE VII.—*Yellow Fever, considered in the Historical, Pathological, Etiological, and Therapeutical Relations*, including a sketch of the disease as it has occurred in Philadelphia from 1699 to 1854, with an examination of the connections between it and the fevers known under the same name in other parts of temperate as well as in tropical regions. By R. La Roche, M.D., Member of the American Philosophical Society, &c., &c. In two volumes. Philadelphia: Blanchard & Lea. 1855.

These two volumes contain near 1200 pages of closely printed matter, and present the most thorough investigations into, and the most complete compilation of, the various authorities on this subject that has ever been made by an American physician.—Probably *no* one has ever before written so extensively on Yellow Fever. Dr. La Roche has already entitled himself to the high regard and confidence of the medical profession as a fine writer and an able investigator, by his work on "Pneumonia." The present work will be highly valued by his medical brethren as a *standard* authority, embracing everything connected with the history, pathology, &c., of Yellow Fever from first to last. We commend the work to the most favorable regard of our readers as the best extant. K.

ARTICLE VIII.—*History of the American Medical Association from its organization up to January*, 1855. By N. S. Davis, M.D., Professor, etc., Member, etc., etc.; to which are appended Biographical Notices, with portraits of the Presidents of the Association and of the author. Edited by S. W. Butler, M.D. Philadelphia: Lippincott, Grambo & Co. 1855. 8vo. pp. 191.

We are indebted to the author, editor or publishers, and certainly feel gratefully obliged to all, for this elegant specimen of choice medical literature, artistic skill and neat typography.—Without stopping to review the book at this time or note its contents, we have to say that it opportunely and felicitously supplies a most important place in the professional history and biography of our country. The distinguished literary ability of both au-

thor and editor will afford sufficient guarantee of the excellence of the work. The engravings alone, which are neatly executed on steel plates, are worth fourfold the publication price—$1 50. A remittance of $3, to Dr. Butler will secure a copy together with the *New Jersey Medical Reporter* for one year, of which he is the able editor—a Medical Journal published at $2, but having no superior in the country in point of interest and merit.

W.

ARTICLE IX.—*A Manual of Clinical Medicine and Physical Diagnosis.* By T. H. Tanner, M.D., Licentiate of the Royal College of Physicians, Physician to the Hospital for Women, &c., &c., to which is added the Code of Ethics of the American Medical Association. Philadelphia: Blanchard & Lea. 1855.

This is a small volume of some 250 pp., written, as the author states, with the intention of removing some of the difficulties, which the student always—and the physician frequently—must encounter, while studying disease in its protean forms at the bedside. We recommend the work to young practitioners especially, as a useful vade mecum, furnishing many valuable suggestions and deductions in the diagnosis and treatment of disease, and the best modes of making post-mortem examinations, &c.

K.

ARTICLE X.—*A Dictionary of Terms used in Medicine and the Collateral Sciences.* By Richard D. Hoblyn, A.M. Revised and enlarged by Isaac Hays, M.D., Editor Am. Journal of Medical Sciences. Philadelphia: Blanchard & Lea. 1855. (Through W. T. Berry & Co., Nashville.)

This Dictionary should find a place on the table of every student and practitioner of medicine. It is complete in all its parts, rendered so by the numerous additions made to it by the American editor.

C.

EDITORIAL NOTICES.

☞ This No. is sent to every physician in East Tennessee, and many out of it who are not subscribers. If they will subscribe, send the three dollars; if not, return the No. We need not appeal to you to sustain your own Journal, the organ of the East Tennessee Medical Society; sufficiently cogent reasons will at once present themselves to every reflecting physician why they should subscribe.

☞ Owing to a scarcity of printing paper, the present No. is issued upon rather an inferior quality. A better supply for the February No.

Change of Journal and of Terms.—Hereafter the Journal will be issued on the first day of every month—each No. containing 64 pages—thus making a volume during the year of 768 pages. The *terms* are accordingly changed. Three dollars *in advance*, or four dollars at the end of the year.

☞ Several new works and pamphlets received, which shall be noticed in our next.

☞ Several valuable communications received, and filed for insertion in the February No. To insure insertion, communications should always be handed in as early as the 21st of each month, and not later than the 1st of the ensuing month. We hope correspondents will bear this in mind.

The Stethoscope, and Virginia Medical and Surgical Journal have been united, and will hereafter be issued under the name of *The Virginia Medical Journal*, every month, each number consisting of eighty-eight pages, at $5 per annum. Dr. McCaw of Richmond, and Dr. Peebles of Petersburg, editors. Dr. Otis, corresponding editor. Ritchie & Dunavant, publishers.

DELINQUENT SUBSCRIBERS.

What paper or periodical does not get its full share of them? We have a few, and to these few we send out our accounts. Some few are indebted for Volumes 1, 2 and 3—a few for Vols. 2 and 3, and still more for the last, third volume. Gentlemen Physicians: the editors of this Journal labor gratuitously in getting up the periodical which they send to you regularly. They do it for the love of the profession of their choice. But the Publisher and the Printer, it is presumed, have no such self-sacrificing devotion, and consequently expect their pay. Will each of you, gentlemen, who found your accounts in the last number, remit the amount in full and help to PAY THE PRINTER.

Our accounts to delinquent subscribers were sent out charging them $3 00, as they had not complied with the terms of the Journal, which are $2 *strictly* in advance. Any one however, who will remit us $5 00 will receive credit and receipts for two years, 1855 and 1856.

Our terms in future for our Monthly will be $3 00 if paid in advance, or $4 00 if payment is deferred beyond six months.

PUBLISHER.

THE NEW VOLUME.

We begin our Fourth Volume under new and brighter auspices. We begin it a *Monthly* of 64 pages, that we may more frequently visit the offices of our professional brethren, and that we may afford additional space for the publication of the many and valuable contributions of our correspondents. Like its predecessor, this volume bids fair to present to its readers entirely original matter. The past volumes have frequently called forth from subscribers voluntary expressions of gratification for their ability and value. The present shall be equally deserving. By referring to our title-page, our readers will also see another change—they will there recognize the names of two medical men well known to the profession by their able productions for other Journals, but much more for the assistance which they rendered in editing the first and second number of this Journal. They

were our former associates—but now they take their place in full fellowship in the editorial corps. Together we will individually and collectively cultivate the field of medical science—gather its choicest fruit into this garner and dispense it with that liberality, that will ensure "aid and comfort" to our numerous patrons.

The path of duty is marked out for the coming year,—and whilst we will earnestly perform these duties for the good of scientific medicine, and will strive, so far as in us lieth, to live peaceably with all men, yet the fear of man shall never deter us from speaking the truth for the truth's sake. To declare the truths of science will be with us a design more earnestly to be pursued, than to combat against error or quackery. But this warfare we will not shun when error or quackery is seen usurping the seat which only Esculapius should be permitted to fill.

A happy New Year, and a year of success in your noble profession, kind patron, we wish you.

EAST TENNESSEE MEDICAL SOCIETY.

It will be seen from the proceedings of the East Tennessee Medical Society, that a resolution was passed adopting this Journal as the organ of the Society, and appointing its Corresponding Secretary as associate editor on the part of the Society.

This arrangement meets with the hearty approbation of the editorial corps, and we welcome Dr. Frank A. Ramsey, Corresponding Secretary, again to a fellowship with us in the editing of the Journal. As the organ of the Society, will not East Tennessee physicians come forward to its support. C.

DR. B. WOOD.

With this number, Dr. Wood withdraws from the editorial corps. We part with him with regret. Pressing engagements have constrained him to this course. During the three years of his editorial career, he has established for himself the reputation of a bold and vigorous and ready writer. He will, however, continue his contributions for the Journal. EDS.

IS KNOXVILLE ELIGIBLE AS A SITE FOR A MEDICAL SCHOOL?

In answering this question in the affirmative, we will state a few reasons for so doing. We have ever been of the opinion that there should be some point where a Medical School might be established, which would be to the South what Philadelphia is to the North, and what St. Louis is to the West. In one of the numbers of the last volume, we were disposed to regard Mobile as that point, hoping that its comparative freedom from the epidemic of Yellow Fever, together with its position, would render it very favorable for the Southern School. We feel convinced, in considering the subject, that, while Mobile possesses these advantages, she yet is too far South to admit of full instruction in Demonstrative Anatomy—an all important branch of study to the physician. We stated in that article certain elements which combine to render a location eminently calculated for success in an enterprise of this character.

In drawing up these elements, we had the city of Philadelphia as our model; certainly the most prominent and the most successful competitor for excellence in medical training on the American continent.

The expression is not a vain one "that Southern medicine, like Southern plants, can only flourish well in a Southern climate." The South requires, and will have, her favorite School of Medicine, the location of which will be determined by its accessibility and the facilities afforded for acquiring a medical education. It is not essential that the location should be eminent as a commercial point, or else New York would have borne off the palm from Philadelphia. Neither is it essential that there should be an over crowded population, for then those cities of Europe where the most eminent Medical Schools are established, as Giessen and Berne, would never have laid claim to the flourishing Universities located there.

But these elements alone evince the fitness of things in any locality for the opening and sustaining of a Medical School.

1. The location should be readily accessible from all points.
2. It should be healthy, not subject to the usual summer epi-

demics—thus fitting it for the prosecution of medical studies in summer as well as winter.

3. It should be sufficiently populous to sustain one or more well regulated Hospitals, to which the students should have free access for studying clinical medicine and surgery.

4. It should possess all the necessary advantages for instruction in the demonstrative branches, anatomy, surgery and pathology; so that its school of medicine will not have to rely upon the transport of *materiel* for hundreds of miles. Its climate should be such that these studies can be pursued through four-fifths of the year without any inconvenience.

5. It should possess suitable buildings for the accommodation of the classes, which should also be attractive and imposing in appearance. And the school should possess a large library, an anatomical and pathological museum, and a complete assortment of chemical and philosophical apparatus.

6. It should enter the field of medical education, determined to resist whatever may be erroneous in the present system of instruction, and to exert itself to bring about a reform till the teaching of the science is commensurate with its importance. Its course of instruction should therefore be thorough and complete. Now we are of the opinion that all of these requisitions are possessed by the city of Knoxville, and we will proceed briefly to discuss her claims for the location of that school which will be to the South, what Philadelphia is to the North, and what St. Louis is to the West.

Knoxville, Tenn., is on the parallel of 36 degress North latitude, nearly equi-distant from the Atlantic, the Gulf of Mexico and the Mississippi River. With this radius, there may be described a circle which will embrace eight States of the Union, all of which in their intercourse with each other are compelled to pass through the valley in which this city is situated. Moreover, there is a greater similarity in the diseases of these eight States, than of any other like number lying together in the Union.

Knoxville is situated in a valley running north-east and south-west, being bounded on the east and west by two parallel ranges

of mountains, which extend into the States to the north and south of us. This physical configuration affords several striking peculiarities in our climate and seasons. Our prevailing winds are from the N.E. and S.W., being to a great degree protected from the chilling north-westers by the Cumberland range of mountains.

The mountains on the east, some of which are the highest in the Union, are covered with snow one-third of the year; and as the valley does not exceed one hundred miles in width, it will be readily seen that these mountain ranges exert a decided influence upon its temperature. From tables kept during our four years' connection with the East Tennessee University, it was ascertained, by comparing with the observations made by Prof. Hamilton, of the University of Nashville, that the temperature here at Knoxville was milder by 10 degrees in summer and warmer 10 degrees in winter, than at Nashville. This fact is attributable to the course and source of our prevailing winds, as well as to the protection and the modifying influence of the parallel ranges of mountains on either side of us.

This valley is the direct thoroughfare between the north and the south. A line drawn from Washington city to New Orleans passes by Knoxville, thus constituting, on the completion of all the railroads, now projected and being constructed, an air line from the south to the north. The East Tennessee and Georgia Railroad beginning at Knoxville connects with the Georgia Road, and leads to South Carolina, Georgia and Alabama. A branch from Cleveland to Chattanooga will unite with the Nashville and Chattanooga Railroad, with the Charleston and Memphis Road, and with the great N.E. and S.W. Road, which is to pass diagonally through Alabama, crossing the great Mobile and Ohio Road, and branching, one arm to New Orleans, and the other to Vicksburg, where it will intersect with the Southern Pacific Road, laid off through Louisiana and Texas, on latitude 32 degrees.—Thus this one road through East Tennessee branches out, when it leaves this valley, into numerous directions, leading throughout the entire south and south-west.

At Knoxville, our starting point, the East Tennessee and Vir-

ginia Road, by one trunk only, branches out in Virginia, leading to Richmond with one arm, to Washington city with the other, and a third is contemplated to the Ohio River. Hence it will be seen that in East Tennessee, these two Roads, the Georgia and the Virginia, constitute one main trunk, each extremity being divided and sub-divided into innumerable branches, affording ready access from all points of the north or south.

Now place a line between Cincinnati and Charleston, and it also passes over Knoxville, constituting the Roads which connect it with these points, also air lines, or the most direct line of travel. The Rabun Gap Road which connects Knoxville with Charleston wants only 60 miles of completion, while the Knoxville and Kentucky Road, when completed, will help to open up a great thoroughfare from the Ohio to the Atlantic coast.

Thus Knoxville will be accessible from all points.

The consequence of this free communication is already manifested in the prosperity of the city.

Its population during the last two years, has increased more than fifty per cent., now numbering about 7,000 in city and suburbs.

Manufacturing establishments of every variety are rapidly springing up in our midst, for which this country is peculiarly adapted, not only from its natural advantages, arising from its full supply of water power, and from its contiguity to the copper, coal, iron, zinc and marble, but also from its agricultural resources. The tendency of things here is to bring the producer and consumer together, in fact a combination of the three great elements of national prosperity—the plough, loom and anvil, in the same locality. This fact is already drawing to our healthful valley, a thriving and an industrious population, by which all the trades, arts and professions are stimulated, and yet not to an undue extent, for the improvement and progress of the place cannot keep pace with the demand.

Thus the future of Knoxville points hopefully to a large thriving, manufacturing population.

For healthfulness, Knoxville will compare favorably with any other point in the Union. While other points are scourged from

year to year, with devastating epidemics, this city has never but twice in its history of three quarters of a century, been visited by more than two epidemics of severity—that of 1838 and of 1854. The two differed essentially in their character, that of 1838 being of a febrile character, and attributable to local causes, the removal of which prevented its return, while that of 1854 was due to a combination of local and atmospheric agencies—such another season having never before been felt throughout the Union—rendering it proverbial as the year of epidemics.

The summer and autumn of 1855 were extremely healthy, the entire mortality during the year not exceeding fifty. As with other seasons, with the exception of an epidemic of dysentery in the spring, and of typhoid fever in the autumn, there was no prevailing sickness of any kind.

Another fact worthy of record is that all classes of disease are here more obedient to the remedy of the physician, than at any other place in our knowledge. Our typhoid fevers and dysenteries, though lingering, are scarcely ever fatal—our fevers are mild—our pneumonias and pleurisies yield readily to treatment, while consumption and scrofula are diseases scarcely known in our midst. While at Nashville, for instance, one-tenth of the mortality is from consumption—here we have not known more than two cases during the last twelve months. This is so true that we can safely recommend this valley of East Tennessee as a safe retreat for all those who fear such diseases, and to those who are already laboring under them, the healthful fresh atmosphere contributing to a prolongation of life's flickering taper.

Thus, for healthfulness, Knoxville is peculiarly adapted for a continued prosecution of studies during summer and winter.—Unlike other cities, the approach of summer is not the harbinger of a dreaded pestilence nor of noxious miasma.

And yet its growing population, consisting in some degree of young men engaged in manufactories, and operatives on our public works, has already called for the establishment of a private hospital, and for preparations for one of a public nature.

A handsome site has been donated for the EAST TENNESSEE

Hospital, and arrangements are being effected for its completion at an early day.

The directness of transportation from the larger cities on the seaboard afford facilities for obtaining materiel for the anatomical rooms at all times and on the shortest notice, while the climate of East Tennessee is such, that such studies can be prosecuted four-fifths of the year.

A Medical School in this city would go into operation under the charter of the East Tennessee University, an institution well endowed, and possessing fine buildings and a large lot containing not less than thirty acres. The chemical and philosophical apparatus is complete and perfect, and would at once be transferred to the chemical department of the Medical College.

The known liberality of the Trustees is a guarantee that suitable and commodious buildings would be erected for the accommodation of the medical classes.

The moral and social qualities of the citizens of Knoxville would also render the sojourn of the student in our midst pleasant and profitable. A community exists here that would generously sustain such an institution, and afford every exterior facility for promoting the interests of the pupils as well as of the school.

For the present, we leave the subject, intending to recur to it in our next number. We ask a careful consideration of the matter, and especially would we urge it upon the Board of Trustees to move in it. Faculties of medicine have at various times been constituted by them, but, owing to insurmountable obstacles, nothing has as yet been undertaken. We ask the citizens and the Board of Trustees to devise the ways and means, and men of the right stamp can be secured to carry out their plans.

In our next we will respectfully suggest the way in which the school can be established, and will propose a plan for its operation.

R. O. C.

JOURNAL REVIEW.

ERGOT.

"My remedy is *tincture of time*, the loss of which is the only thing to be regretted, for it at least produces no additional evils."—*Gooch.*

If it is proper that Medical Journals should be under the control of Professors in Colleges, that "they may avail themselves of the press, to address a larger and more enlightened audience beyond the college walls and vindicate their ability as instructors," it is manifest that they should exhibit the influence of such a motive in the theoretical and practical papers communicated by themselves, and in detecting and correcting or preventing the errors, dangerous precedents, and unnecessary resorts, committed, attempted to be perpetuated, and proposed by the correspondents of their Journals. In the event of such a course by a Journal having a college in espionage, it would be advertising in a tone at once honorable to the editor and teacher, contributors, readers, and pupils, and commensurate with the dignity of a profession essentially good.

The responsibilities of an individual occupying a professional chair, are not lessened, but rather enlarged and enhanced by his assuming the chair editorial. He is known to be a teacher; and is presumed to feel a care for the thousands of lives dependent upon the correctness and qualifications of those who have received their induction into the profession from his mouth, and who look to the productions of his pen for wisdom, to his pointings for guidance.

It is a received doctrine that an editor admitting a communication vouches for the reputability and professional capacity of the contributor. Hence, if any erroneous doctrine, or dangerous practice, or meddlesome resort, be advanced, defended, or proposed in a communication, unless the editor enters a caveat, or enunciates a disavowal, in connection with its publication, he endorses the contributor and his positions, and in a degree corres-

ponding with the character and influence of the endorser, and the insidious nature of the positions, will be their adoption, and the extent of injury inflicted upon the medical and the common public.

It is not presumed that any one will deny that such is necessarily the received doctrine; and least of all that a teacher-editor could desire that responsibility should not attach to him, for any writings, save his own, appearing in the Journal under his control; but as evidence is proper on all occasions, theologians not refraining even from attempts to *prove* the existence of a God, testimony will not be withheld, which sustains the particular responsibility here affirmed.

The American Medical Association by tacit agreement is appellate resort, and source of precedent, ethically, if in no other particular, for the members of the medical profession of this country; and, the standing announcement, conspicuously placed, by resolution, at the beginning of each volume of "transactions," reads—"The American Medical Association, although formally accepting and publishing the reports of the various standing committees, holds itself wholly irresponsible for the opinions, theories, or criticisms therein contained, except when otherwise decided by special resolution." If the ethical point is not as has been stated, what necessity for such a general disclaimer? Is it not a very positive acknowledgment of the universal reception of the doctrine of editorial responsibility, the spirit of which the members prefer to comply with in a manner directly commendatory, whenever opportunity presents, rather than to employ the very many occasions given them to use a manner directly condemnatory?

"The American Journal of Insanity, conducted by the officers of the New York State Lunatic Asylum," and which stands in somewhat the same relationship to the Association of Medical Superintendents of American Institutions for the Insane, that the annual volume of "Transactions" bears to the American Medical Association, has more than once pointedly informed its readers, that "its editors do not hold themselves responsible for articles appearing under a reliable signature." The reason for this,

is given by Dr. Ray. "It is rather a collection of papers than a *thoroughly edited* Journal." But according to the same authority, notwithstanding all this, there are occasions when "it would be well," the peculiar character of the Journal destroying the otherwise ethical demand, for the editors to enter a caveat, or disclaim responsibility.

An editor of a Journal, published in a middle or western State, who has had the fearlessness to declare himself familiar with ethical canons, "in their most delicate minutiæ," has given one evidence, at least, that his sense of responsibility accords with the assumption presented in this introduction. He commended so much the general features of an article written and published by another editor, as to give it to the readers of his own Journal. But in republishing the article he made a note, in which he suggestively stated an objection he entertained to a practical particular recommended or adopted by the author-editor, and practitioner; determined, that however successful the procedure in the practice of such a man, he himself would not be responsible for any injury that unhappily might follow the practice when employed by some of the readers of his periodical.

The course of the Journals of the two professional associations, and this instance of a "Western Editor," are deemed sufficient to sustain the point for which they are introduced.

It is much to be regretted that the editor's sense of responsibility has not furnished any number of instances of objections to the direct or inferential errors and dangerous procedures contained in the many communications to the medical profession which passes review in the sanctum before entering upon their course of influence for good or for evil. But it seems that the editorials of the Journal now before us are more given to "commendation," than to "disapprobation;" and so too, notoriously are phrenologists. Without at present permitting any enquiry into the inner-man, or internal motions of either illustrator of science—editor or phrenologist—the axioms of wisdom are introduced, as worthy of being appropriated by every one desirous of exerting an influence. "The opinion of one who always commends and never condemns must be received with much consideration." "He is either knavis or foolish who neither condemns nor is condemned."

An editor who condemns in a single instance, and ever recommends, attaches a weight and importance to the positions which are recommended, that in themselves, however strong, they otherwise would not bear; and in some degree detracts from the in-

fluence which other articles that are permitted to remain unnoticed, should, justly, exert upon the practice of medical men.

On opening a number, belonging to volume third of a Western Medical Journal, the following editorial language will be found: "The article in the present number from Dr. ———, promises greatly to widen the domain of practical obstetricy—it indeed reveals a discovery of untold practical value. Those who know (its author,) know that he is no dreamer, but a close and philosophic observer of the operations of nature, and the effects of means and appliances put in requisition to aid her." This is certainly as much endorsement as a man could desire for himself, or for his positions. Even if the editor should desire a different position, or had the hardiness to declare himself "responsible for nothing that appears in our Journal save what we ourselves write," he could not shirk the responsibility assumed in this editorial, for the article to which it refers, and which gives occasion for this number of the Journal Review.

The article referred to in the significant language of the editorial will be found on page 342, No. XII, of Vol. III, of the Journal,—entitled: "A VALUABLE SUBSTITUTE FOR ERGOT."

Just so much of the article is quoted here, as is deemed necessary to show to the readers of this department of the Journal, that the western editor, in penning the editorial recommendatory, did not duly consider how much is involved in a few lines of type, and in a generous moment lost his regard for the position in which he "vindicates his ability to instruct," or for the interest of that portion of the common public liable to be affected by whatever influence he may directly or indirectly exert. The reporter, and discoverer of "a valuable substitute for Ergot," says: "I lately attended a midwifery case and deem it advisable to report the treatment for further investigation.

"The pains commenced at 4 A.M., and continued at intervals of 15 to 20 minutes, until 6 P.M. were slight and produced but little effect; upon examination found os uteri dilated, head presenting, high up; scarcely any effect perceptible during the pain. Not willing to leave the management of the case any longer to nature, I concluded to dry cup her.

* * * The result was satisfactory to all interested: for complete relaxation ensued, at the next pain the head descended to the outlet, and at the second pain she was safely delivered, and that too in less than ten minutes from the application of the cup. * * * This is the second case in which the above plan has been tried; in the first, the patient was delivered in about fifteen minutes, and with three pains."

The article is on a mission for evil or for good; and in the number of the Journal in which it appears no disquisition is found, from the editor or his colleagues, on practical obstetrics, commendation of the article and its author being considered as sufficient by way of instalment, in satisfying the debt due, if any, from the occupancy of the relative positions of teacher and editor. The author's positions then have ex cathedra endorsement,—they are true, their practical bearings—positive and inferential—are correct and certain, or the endorser fails in the completeness of his "vindication"—establishing his "ability as instructor."

In the two cases, a very short time passed, a very few pains occurred, from the application of the cups, until the birth of the children; and that the record of this exceeding promptness of effect following upon the cause has been made by a "close and philosophic observer of the operations of nature," the editor's character for "close and philosophic observation" is involved.

It may be wrong to question the ability of any one to give direction to reliance, who readily receives the post hoc propter hoc features of this communication, exhibited in claiming for the cups the rapid and safe birth of the children, in the two cases; and it may be impudent, hardly imprudent, to doubt the propriety of securing an observation, as entitled to the respect of experience, when endorsed by the avowed organ of a model medical school. But it must be so; the wrong is perpetrated; the imprudence is committed—for it is believed that two observations are insufficient to establish a point of practice, though one may be enough to disprove the correctness which had attached to five thousand.

Though there are moderns, "who have studied the *whole field* of practical medicine, and *understand well* both its impregnable points, and those accessable to the enemy," who have attained confidence in their own powers both native and acquired, yet some remain who humbly acknowledge the wisdom of Hippocrates, as illustrated in his saying "experience is fallacious, judgment difficult," and who apply it many times during the course of a professional life. Soon after the agent, which it is proposed to displace by dry-cups, was announced, its claims were investigated, its action closely enquired after, and its efficiency for some time doubted. Chatard of Baltimore, an extensive obstetrician tried the Ergot, and his article on the properties of the substance, exhibits the close and philosophic qualities of an observer worthy of commendatian and imitation. And a paragraph of his communication is introduced here, to be applied, if proper, to the "two cases," which the editor says promises greatly to widen the domain of practical obstetricy. "What experienced ac-

coucher has not witnessed numerous instances of those *caprices* (if I may be allowed the word) of uterine functions? They will even take place when an apparent exhaustion might justly alarm us, and command the use of artificial means. All at once the uterus recovers its energies, and gives us no time to replace the mother on the couch which she had left the minute before."

The annals of obstetrics furnish many cases of rapid labors, in which the os uteri had dilated, and the soft parts relaxed, so gradually and without any noticeable pain, and to such an extent, that two or three parturient throes were sufficient to terminate the labor, and they suddenly occuring to the women when at the night glass, the close stool, or when walking. And every practitioner has had occasion to observe labors in which there occurred frequent and slight pains, producing but little effect, "scarcely any effect perceptible during the pain," but which, without any assignable cause, assumed vigor of action, strength and permanency of pain, and terminated suddenly and safely. Dewees relates a case, for the purpose of showing how easy coincidence may occur, and be mistaken by those who are not "close and philosophic observers of the operations of nature, and the effects of means and appliances put in requisition to aid her." The patient was in her fifth confinement, and had been in labor, with the waters discharged, for some time. An abatement of force and frequency of pain occurred, and persisted. Previous to their highest degree of abatement, the womb had fully dilated, and "*every thing* gave promise of a speedy delivery, the head of the child presenting in the first position, and *having reached the inferior strait*, Ergot was resolved upon, but had to be sent for; but the messenger had scarcely left the house, when the energies of the uterus aroused spontaneously, and the child was born without any artificial aid of any kind. In this case had the Ergot been given, the alteration in the action of the uterus, would doubtless have been attributed to it." And many years before Chatard had given two cases of similar bearing. "I had been attending during six hours at the bed-side of Mrs. K.; had no greater dilatation of the os tincæ than a half dollar diameter, and prescribed the Ergot; but during the short space of time necessary to prepare the infusion, delivery was accomplished. The case of Mrs. S. was of the same nature. I was holding the draught to give it myself, when a supervening pain plainly satisfied me, that it was not required. * * * Delivery was effected in thirty minutes."

And Cazeux case conveys the same lesson, and is with the others sufficient commentary upon the deduction of the author of the

article, which has led the editor into such a rhapsody of commendation. "In examining a young woman enciente for the first time, I found the orifice dilated, nearly as large as a two-franc piece, and supposing that the labor would still persist for some time, I withdrew, but scarcely had I reached the foot of the stair case, when a messenger came running after me in great haste; I immediately returned, and found the head on the point of clearing the vulva, which was already considerably opened," &c.

But it is believed that two cases, with a teacher-editor's endorsement should not be esteemed as sufficient to displace an agent which has been for such a length of time, and so severely, tested, as has the Ergot. Seventeen years after Dr. Stearnes' letter to Dr. Acherly, acquainting the profession with the presumed or known properties of the substance, Dr. Davis of London said—"*the pretentions* of Ergot have been generally known to the profession for a period of nearly twenty years, and yet the actual fact, of its power has not been satisfactorily established." And at a period still later, Cazeux, of the faculty of Paris—a "model faculty" for many learned men, who are teaching, if not for the Young American giants of the west—Cazeux appeals to "*thousands* of instances in which its administration has always been followed by the same uniform results," to sustain his opinion of the efficacy of Ergot as a parturifacient. It is hoped that due charity will be extended for thus placing in contrast the weakness of Cazeux's "thousand" and the potency of the editor's "two," for really, it seems hard that twenty years and more, and thousand of instances should be requisite to establish the powers of a substance, to be so easily displaced by two cases, recorded by a "close and philosophic observer," who is "no dreamer." But if such a contrast be not sufficient to demonstrate the haste of an editor, in commending and in unconditional language, a comparatively untried resort, the remark of Sam'l Jackson of Northumberland, supplies testimony of a positive character. Nearly twenty years ago he expressed a truth, received before, and as yet undenied—"*the utility of a new medicine can never be substantiated by the authority of a few.*

It is evident, if the suggestion of a substitute for Ergot, is made in earnest, and the editor really believes "a new and wide domain is opened" by the suggestion, that as yet very much cannot be said to sustain or detract from the "repetition as a prophet, now well established." The substitute may possibly be employed by the portion of the younger members of the profession, who have not become familiar with the objection ordinarily urged against Medical Journals, of presenting, too commonly, sug-

gestions of new remedial or medicinal resorts, based upon insufficient data. But the older practitioners have been too long accustomed to the efficiency of appliances over the sacrum, presumed, or known, to produce a filling of the capillaries of the surface, such as mustard plasters, dry-cups, and the like, for the purpose of destroying uterine action in threatened abortion or premature labor, to believe without more evidence than is furnished by two cases, that one of those appliances will occasion, and powerfully, the very action thay have seen allayed immediately after the application of that very procedure.

But the danger of the article, "recommended and vouched for," by the editor in vindicating his ability as an instructor, does not consist in the cups, or their application,—the direct teaching of the communication. An inexperienced operator, failing to discover uterine action following upon the application of the cups, would probably reflect that they are but a substitute, and regarding the indications given in the article, for the use of the substitute, as identical with the indications for the use of the agent proposed to be displaced, would doubtless, administer the Ergot.

Now, every well informed practitioner is familiar with the very dangerous character of this very positive agent, and yet it seems that the exceeding great discretion which should be exercised in administering it to parturient women, so strenuously urged by every worthy esteemed obstretician is disregarded by a very large number of practitioners whose cases of labor have never reached half a hundred a year, and who confident in their own superlative judgment, make administration their rule, and non-employment of the agent, the exception. Stearnes himself, proud as he must have been in his ability and the circumstances contributing to establishing it, to furnish the profession with a new means of accomplishing good, affirms that he found it necessary to use the Ergot in one of every thirty cases of parturition placed under his charge; and yet there are practitioners whose statistics would contrast very forcibly with his, even, probably, making its virtues evident by administering the Ergot in twenty-nine cases of every thirty. A wise Providence in ministering to the amelioration of the woman's condition, has benificently ordered that the active properties should be only temporarily resident in the Ergot, so that by far much the largest quantity which is administered, is only so much matter, wholly destitute of parturifacient power, and hence, comparitively, but little damage results from its use by those who

"Rush,
Where wisdom fears to tread."

That it is too dangerous to be employed in accordance with the indications of the recommended article, such testimony as the following, it is presumed, will prove, "most satisfactory to all interested." Dr. Stearnes, introducing the agent to the notice of the medical profession, in 1807, until then unfamiliar, if not wholly unacquainted with Ergot, employs language well calculated to make the conscientious physician very careful as to the character of cases of labor in which he solicits its influence—"the *violent* and almost *incessant* action which it induces." During the year 1820, the notes of warning were more distinctly sounded by Chatard of Baltimore,—"It would have been highly pleasing to me, to write under the banners of those who do contend that the Ergot is an effectual and *innocent* remedy;" and such intimations, more or less positive are to be found here and there, from different persons, in the medical periodicals issued during the years which have passed since the presentation of the rye-grain to the profession, up to the period when such periodicals have multiplied and become, to a considerable extent of the advertising mediumns of sapient professors, rather than the archives of "close and philosophic observations." But the systematic writers, accouchers of long practice, and enlarged experience, furnish an abundance of language expressive of the danger, which is designed to be portrayed to the readers of this notice with the hope that the indiscriminate appeals now-a-days made to the Ergot may by their influence in their own immediate neighborhoods be contracted or even destroyed, so that ultimately, none but well instructed and good principled men may ever be the witnesses of its energy upon the woman in the throes of child-birth. If any apology for such a course is considered necessary, the language of Dr. Holcombe to Dr. Dewees in 1825, is adopted, as being more eminently appropriate in 1855, than when it was written, and rendered so by the unwise recommendations and adoption of carelessly stated indications, by those who have placed themselves as watchmen on the citadels of the profession. "Much it is true has already been written concerning it; and I am aware, that practitioners are *supposed* to be well informed as to its properties, and the cautions necessary to be observed in its administration. But this I am persuaded is a mistake—and in my opinion you could not more efficiently subserve the cause of humanity, and obstetrics, than by devoting a chapter in the next edition of your work to the consideration of the uses and abuses of this article." That such an opinion is not entertained by the organ and guardian of a medical shool is evidenced by the appearance in the Journal of an article on the "abuse

of Ergot," without any notice recommendatory of either the article or its author, and therefore, the nature of all the circumstances being duly considered, such a citation of authority is believed to be necessary to the interest of "honorable medicine," in the latitudes in which these Journals have a circulation. Dewees introduces portions of Holcombe's letter to be used for the purposes of instruction—"admonition and reproof,—and the representation of such a lesson as is conveyed in the annexed sentence cannot fail to have some effect." But if the use of the terrible instrument (crotchet) just named, be as reprehensible (and who will presume to deny it?) as you have represented it, how much less so, or rather how much more so, is the intemperate use of an agent which sacrifices a four-fold, if not a twenty-fold greater number of victims? More children, I am satisfied from what I have seen and heard, have already perished by the injudicious use of Ergot, during the few years which have followed its introduction into the practice of this country, than have been sacrificed by the unwarantable use of the crotchet for a century past." Lee tells his pupils and his readers that "secale is certainly not a remedy which can be safely entrusted to inexperienced practitioners, or which ought to be prescribed in any case without the utmost caution. If in practice you go about constantly armed with *this weapon* you will probably be tempted to administer it in cases where the difficulty and danger are not removed by exciting contractions of the uterus." And last, because known in the United States, as one successful in practice, as well as in obtaining confidence, to an extent greater probably, than any other one obstretrician of this country,—last because he conscientiously teaches the results of his observation, and fearlessly without the bolstering vaunting of the professional demagogues. Meigs says: "It is true that I have known laceration of the womb follow the exhibition of Ergot, and have on occasions stood by and expected that horrible result. This is a rare event, however; whereas the death of the fœtus from the rash exhibition of the medicine is a common one, which is reasonably to be looked for," &c.

Now with the opinions of such men freshly impressed, let the readers mind run over the indications given by a practitioner, and recommended by an editor and teacher, for the employment of "a valuable substitute for," and in the event of its failure, of course, for the employment of "Ergot."

The reporter says nothing whatever as to the number of labors his patient had passed through, if any; and of course it is left to be presumed that neither he nor the endorser of his views, have

any regard for the opinion so universally entertained by the obstetricians, whose positions and reputations give the conclusions which they enunciate authoritative weight, that Ergot is an inadmissable resort in first labors. In the earliest years of the use of the Ergot it was intimated in terms more or less strong, that it should not be appealed to in primiparæ; and in 1829, but little more than twenty years after Stearnes' letter to Acherly observations had been sufficiently extensive to have demonstrated the necessity of an explicit rule on the subject, which is given, if not by others, by Dr. Davis, Surgeon, Preshore, in these words: "It ought *rarely* to be given in first cases." But later, in 1844, Lee of London, employs language which constrains the use of the agent within bounds permitted by the word "rarely," unhappily found in Davis' rule. Lee says: "It is agreed on all hands that Ergot ought not to be given in first labors." It is true that as late as 1850, Cazeux's language is of such a character as to make the agent admissable under some circumstances, but by far the safest course is to follow the teachings, in this particular, of the Englishman, in preference to the Frenchman—it is more in accordance with saxon considerateness. Cazeux says: "Its administration ought to be avoided as much as possible in primiparæ, and *if it should* become necessary in them," &c. While Meigs tells his classes that "I rarely give Ergot as an expulsive agent. * * * * Upon the whole, I must say, that *I feel far more comfortable, and free from apprehensions for the child, and the mother, when I deliver with the forceps.*" These are abundant to show that in placing on record any indications directly or remotely influencing the practitioner to resort to Ergot, any omission of reference to the number of the labors is an exhibition of want of closeness, and precision, essential to the formation of philosophical conclusion or determination.

The reporter states that in his "midwifery case" the pains commenced at 4, A.M., and continued at intervals of 15 to 20 minutes, until 5, P.M.;"—consuming a period of fourteen hours. A very few minutes before the termination of these fourteen hours the attending obstetrician "concluded to" employ, and actually put in play operative intended for assisting procedure; and assigns for the satisfaction of such readers of the article who may be at all inquisitive on the point, a reason for the concluding," and the resort, which doubtless is abundant for an editor who knows his correspondent to be a "close and philosophic observer," but which is, it must be confessed, itself so relative, so dependent upon conditions, that some, with probably less qualities of "closeness" than the author of the article, would prefer to see

it exhibited somewhat in the character of the reason for operative resort, would desire less comprehensiveness, more explicitness, in the particular. "Not *willing* to leave the management of the case any longer to nature, I concluded to," &c.

How many years have elapsed since the discovery that "meddlesome midwifery is a dangerous thing" need not now, it is hoped, be made a matter of research;—it is received and accepted as experience, and any one who doubts it, hypothetically, is a fallacious reasoner, and any one who ignores it, practically, is guilty of temerity without discretion, bordering close upon, if not fully exercising a rashness indicative of an absence of that conscientious sense of responsibility which should be the distinguishing feature of the man-midwife. No odds how simple or inefficient the resort, if it is unnecessary it is meddlesome, and if not in itself directly injurious, its practice and with seeming success, it is to be feared, will embolden the operator, and instigate him at another time, when "not willing to leave the management of the case any longer to nature," to conclude on something more powerful, more directly dangerous.

A very old writer on "Lying-in-women" has pertinently observed that it "frequently happens that those who are the busiest when there is no necessity, are the most incapable of giving relief in cases of real danger."

Since Hamilton's activity, if not before, when time has at all been regarded as in indication from which to draw conclusions, "twenty four hours" have been allowed to nature, before the obstetrician had a right to "conclude" she had been waited on long enough, and therefore he would himself assume to direct, and expeditiously terminate the labor which the good old dame had so tardily and inefficiently managed. Hence, systematic writers who have regard to time as an element of labor say natural labors are those which terminate within twenty-four hours without requiring any artificial assistance. And it follows, of course if this definition be true, that the consumption of fourteen hours in uterine efforts, without terminative effect, is not, alone and of itself, a sufficient indication that assistance of any kind is needed, is not enough indication for the administration of Ergot, and necessarily, not enough for the employment of "a valuable substitute for Ergot." When White was a practitioner, whose work is one of the oldest now in the libraries, to which obstetricians can appeal, it was considered safe to "leave things to nature, as in general she performs her work best without assistance," though even in these days it was proper "where nature is very slow in relieving herself, assistance ought to be given, *but not till it is*

seen how far she is able to do without it." And Hamilton, who is authority for *natural* labor consuming twenty-four hours, attempts to show the happy medium necessary to be discerned by the good obstetrician, in saying "for in many instances a delivery that ought to have been quite natural, may become difficult and dangerous, not only from improper interference, but also from omitting those means by which the obstacles to the birth of the child, natural or acquired, may be counteracted." Now whether at the end of fourteen hours, in the case under notice, nature had exhibited how far she could do without assistance, the readers of the article have nothing to judge from except the editor's endorsement of the "close and philosophic" character of the reporter, and his "not" being "willing to leave the case any longer to nature." But "close and philosophic observers of nature" have for many, even a hundred or more years affirmed that nature can be trusted more than fourteen, nay indeed for full twenty-four hours; and that even should she exceed that time she can be trusted yet longer, the case becoming at most "tedious," or "lingering," or "protracted," and not requiring artificial assistance without the supervention of some particular evidences that the old matron is getting weary, and would not object to a judicious application of such resorts as heretofore she has in a thousand instances, received with satisfaction. This dependence is taught in the quaint use of language by the amusing Gooch—"I am never fool enough to state any time within which the labor will be over"—reserving to himself a knowledge of the circumstances indicating a demand for interference, he preserved his conscience by predicting some cases rather a tedious time, by staying out of the lying-in-chamber, and by making the patient's time pass as pleasantly as possible—not by any appliances possessing efficiency, or in themselves useless, brought into play by the "looks and hints which are sufficiently intelligible, that your competency is thought to be rather questionable." Ramsbotham is another systematic writer who ignores the necessity of rendering a labor other than natural, unless by some demand, which can be defined, described, and explained, under twenty-four hours. "Natural labor * * * in which *not more* than twenty-four hours are occupied from the commencement of true uterine action to the termination of the process," and who makes a lingering labor * * * * "so that it differs from a natural labor only in respect of its duration." Burns says "a natural labor *ought to be* finished within twenty-fours after the first attack of pain;" but just before this assertion, he gives those appealing to him for information, to know that "the duration of this process, and of its stages, varies

not only in different women, but in the *same* individual in successive labors; for although some, without any mechanical cause, be uniformly slow or expeditious, others are tedious in one labor, and perhaps extremely quick in the next, *and this variation cannot be foreseen* from any previous state of the system." But in treating of labors protracted beyond the twenty-four hours, so as to become lingering labors he warns thus: "In such cases, unless the process be *considerably* protracted, or attended with circumstances requiring our interference, it is neither *useful nor proper to do more than encourage* the patient, and preserve her strength. In a state of suffering and anxiety the mind is apt to exaggerate every evil, to foresee imaginary dangers, to become peevish or desponding, and to press with injudicious impatience for assistance which cannot safely be granted. Great forbearance, care and judgment then, are required on the part of the practitioner, who whilst he treats his patient with that gentleness and compassionate encouragement, which humanity and refinement of manners will dictate, is *steadily* to do his duty, being *neither swayed by her fears and entreaties, nor by a selfish regard to the saving of his own time.*" As regards the duration of labor, Cazeux remarks, it "is exceedingly variable, even when no obstacle opposes its course. Some women are delivered in an hour or two, whilst others are not for several days; and between these two extremes there is every intermediate grade." And Meigs, after referring to the duties of the accoucher, very positively asserts that no one can tell before hand when a labor shall terminate." This array of opinion has been made for the purpose of showing, what some may presume every one, even the youngest professed obstetrician knows, that something else besides "unwillingness to wait" on the part of the practitioner, and the consumption of "fourteen hours of time, are necessary to satisfy the conscientious practitioner of midwifery that the employment of either a "substitute" or of Ergot would be *useful or proper*. To the same effect might be introduced the authority of Churchill, Lee, and Rigby, and, the more to be esteemed, Collins, whose language is most certainly adverse to the employment of any assistance from no other reason than the attendants "unwillingness to wait," and "fourteen hours" having elapsed,—"there is no subject connected with the practice of midwifery, so difficult to acquire a sound knowledge of as the treatment of tedious and difficult labors. It is one of the most vital importance, and, in the most marked manner, distinguishes the experienced from the inexperienced practitioner."

And immediately upon the introduction of the quotation from

Collins, the readers mind is again refreshed with the reporter's record—"the pains were slight and produced but little effect; upon examination found os uteri dilated, head presenting, but high up; scarcely any effect perceptible during the pain." It is to be noted that "a close and philosophic observer," and the endorser of his paper, esteems the fact that the os uteri is dilated, and the head presenting but high up, descriptive of a parturiant condition in which it would be eminently proper to afford assistance, or to institute manœuvres or administer medicine with a view to expedite the action of the womb. But Dr. Ives in 1821, taught, and it has been reiterated in positive terms, or language strongly inferential, that "an important part of the natural process of parturition is *the relaxation of the soft parts of the mother*,—(the vagina, and the perineum)—and *the adaptation of the child's head to the pelvis*. * * * * * These effects are the work of time; and it is not surprising, that a premature interference of art, which produces the most violent and unceasing contractions of the uterius, should thereby suspend or destroy the life of the fœtus." Now it is surprising that a writer with close and philosophic qualities, and an editor vouching for their possession, should not have noticed the omission in the record of the breaking of the membranes, and the discharge of the water; and it is therefore assumed, in connection with the two facts, the dilated os uteri, and the head high up, that the membranes were not broken, at the moment the obstetrician became unwilling to leave the case any longer to nature. This being true it is legitimate to suppose that the soft parts as yet were unrelaxed, and that old dame nature, appreciating some fact not cognizable to the attending practitioner was reserving her power, and therefore any interference on his part was useless if not improper. Few, if any, doubt the very valuable influence of the mechanical pressure of the bag of waters which precedes the head of the child, preventing it from engaging in the pelvis at a period too soon for its safe passage; and any manœuvre or resort, instituted at a period when the head is high up, at all tending to the rupture of the membranes, the discharge of the waters, and the destruction of the mechanical force, regarded by all good practitioners of midwifery as officious, as meddlesome, as dangerous. The teachers are explicit in terminating the first stage of labor with the "dilatation of the os uteri *and* the escape of the waters," and pointedly condemn the artificial rupture of the membranes, unless the labor is very considably protracted, the woman very much wearied, and the bag of membranes very positively and greatly distending the perineum, even emerging at each successive pain, from the os externum.

Seldom does the head become adapted and fixed in the pelvis so long as the membranes are preserved in tact; and it is experience, universal observation, that so long as the soft parts of the mother are not subjected to pressure from the head of the child, there is but little liability of those evidences of constitutional injury which the good practitioner so much dislikes to encounter, and which more frequently result from unwise haste and anxiety and improper interference, than from any unavoidable cause. A practitioner residing in an inland town on one occasion attended a lady in her fifth or sixth labor for ten consecutive days. At no time was she without active uterine action for a greater period than four hours; and at every successive pain, the os uteri being soft and fully dilated, the membranes would distend the perineum, and almost emerge from the os externum. Two or three pains would occur in succession, with which the lady became satisfied for the time, turned upon her side, and calmy engaged in conversation, or fell to sleep. So long as she remained on her side the pains did not recur; her pulse was natural, no excitement of the respiration, no thirst, no dryness of the tongue, no difficulty in discharging urine, regular discharges from the bowels, and good appetite which she reasonably indulged. There was no deficiency in the strength of the pains, perfect relaxation of the soft parts, but the head, which was the presenting part, did not engage in the pelvis, until a very few minutes before the child was born,—at which moment the membranes broke, and the labor was safely completed. The attending accoucher instituted no resort whatever, because neither the condition of the child or the mother required;—though the "head presented but high up" he was yet "willing to leave the management of the case longer to nature;" and for near ten days—from Friday morning until the evening of the second Sunday following, he had the "tedious" pleasure of "closely and philosophically" observing nature alone, without "the effects of means, or appliances put in requisition to aid her;—for near ten days he watched for an evidence of the point of time having arrived when "assistance ought to be given," but nature was "able to do without it," and in her own time accomplished the process of labor without difficulty or any unpleasant after occurrences. And the case recently put on record, in one of the Journals, for the purpose of showing how much the condition of the mind affects the parturient efforts, proves the same thing. A practitioner visiting a woman in labor finds on examination the os uteri relaxed, and the membranous bag descending very low, in short everything favorable to a quick termination of the labor, and so announced his opinion to the assembled

friends. But the woman says no, I'll not be delivered, until aunt Nancy comes. The practitioner smiled derisively, so sure was he that the membranes, already near protruding, would break, and the child be born, and very soon. But he was mistaken. The womb ceased contracting, the membranes remained in tact, the child was preserved, and the head not having engaged in the pelvis, the mother suffered nothing by remaining quiet a week longer, waiting for aunt Nancy. These cases testify, and most strongly, not only to the safety of leaving things alone, and letting "nature manage the case," but to the impropriety of any interference when the "head presents, but high up," and the "os uteri dilated," but the membranes remain unbroken.

Any amount of authority could be introduced to sustain the point, but it is so presumed that Collins alone is sufficient, and full quotation is made, from his work "containing the result of SIXTEEN THOUSAND, SIX HUNDRED AND FIFTY-FOUR BIRTHS."

"We must be guided, as to the propriety of giving assistance, chiefly by the present symptoms, and previous history, and NOT BY THE LENGTH of the labour, as some will suffer more in thirty hours than others in ninety. Generally speaking, so long as the pulse remains good, the bowels and bladder act well, the soft parts remain free from severe pressure, and uterine action continues so as to cause the presenting part to descend ever so slowly, the patient having no pain in the abdomen on pressure, or local distress, the child at the same time being alive, as indicated by the Stethoscope, I am satisfied no attempt should be made to deliver with instruments, and that he who does so wantonly exposes both mother and child to danger. "The Ergot was introduced as a substitute for the forceps, which Meig's says he prefers, and the indications for the use of either are assimilated;—a substitute is proposed for ergot, which doubtless many will prefer to continue employing, and the indications are assimulated—the use of instruments, Ergot or substitute then, when no other indication is present except the os uteri dilated, and the head presenting but high up, and the attending practitioner's "unwillingness to leave the management of the case to nature," is according to Collins—and he will be sustained—"a wanton exposure of both mother and child to danger."

It is settled that the forceps should be applied only when the head presses much upon the perineum, and has passed so far through the pelvis that an ear can be felt, the uterus calm, or acting inefficiently; to this rule there are of course exceptions.—Precisely the same is true of the proper use of Ergot. In the hands, or under the direction of a kind considerate judgment,

that never wearies in watching, and is prompt to act when demand requires, it is an efficient and beneficent agent; but when in the hands or under the direction of practitioners who disregard conditions, and employ "means and appliances" to save their own time, or minister to their own pleasure, it is dangerous,—destroying, relatively, more lives than steam in its suddenness, or the tornado and tempest in their fury. The practitioners whose observations were collected by Dr. Ives in 1821, established rules for indications, for the guidance of practitioners, and subsequent observations have but confirmed them, and they are therefore now experience, and any one acting contrary or in violence to them is amenable to censure before man and God. These are the relaxation of the os uteri, the breaking of the membranes, and the discharge of the water, the relaxation of the vagina and perineum, the presentation of the head, in a natnral position *in every particular*, and "only in long protracted or tedious labours, and in such of those *only as depend* on the *exhaustive* or inactive state of the uterus, that the Ergot should be given." Dewee's sample case, refered to in this paper, fills every requirement, the Ergot or a substitute would have been admissable, but was not necessary; but it is contended that an editor's commendation is easily secured, who will directly or indirectly, studiously or carelessly approbate the employment of Ergot or a substitute with a labour only fourteen hours in duration, and at a time when the head is not appositely adapted, the membranes are unruptured, and the soft parts unrelaxed.

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ARTICLE XI.—HOSPITAL FOR THE INSANE.

BY RICHARD O. CURREY, M.D., KNOXVILLE, TENN.

Among the many striking characteristics of the age in which we live, an important one is the multiplication of asylums for those in whom reason is dethroned, and the improved mode of treatment to which they are subjected. And in our country, no one has done more to advance this laudable object than Miss D. L. Dix. Traversing nearly every State in the Union, she has devised and sought to carry out projects for the relief of these unfortunates, and she has gone no where, and proposed no plan that has not found a hearty response in the hearts, as well of law-makers, as of their constituents. And she has not ceased her exertions when her plans were proposed. She has been happy in securing the right sort of men to carry them out. As every Physician is not competent to the discharge of the duties which appertain to such an Institution, and as every building is not adapted for the treatment of such diseases, she has sought to impress upon those, to whom the power belonged, the necessity of attending particularly to these two elements of success. Such

Second Biennial Report of the Trustees, Treasurer, and the Physician and Superintendant of the Tennessee Hospital for the Insane—transmitted to the Legislature, Nov. 8th, 1855: Nashville, Tenn., 1855.

Report of the Trustees and Superintendant of the Butler Hospital for the Insane, presented to the Incorporation at their Annual Meeting, January 24, 1855: Providence, R. I.

at least was her mission to our State, and such has been its fulfillment. A site for the Institution was selected sufficiently far from the city to obviate the difficulties arising from crowds of visitors, and a splendid building erected thereon.

The building is of the Castellated style, extending east and west, four hundred and five feet, and running back, at each end, with wings two hundred and ten feet, and is four stories high, exclusive of the basement.

Every convenience is furnished, and the different parts of the building is arranged so as to afford an entire separation of the male from the female patients, and of those laboring under different degrees of insanity, from each other.

The entire building is heated by steam—the current being propelled by a centrifugal fan driven by a steam engine—the fan being seventeen feet in diameter, and the quantity of air discharged may be carried as high as sixty thousand cubic feet per minute, being two hundred and fifty cubic feet per minute to each occupant.

During the two years embraced in the Report of the Physician and Superintendant, Dr. W. A. Cheatham, from October, 1853, to October, 1855, there were one hundred and ninety-two patients in the institution, of whom eighty-seven were discharged. Of these, forty were restored, thirteen much improved, seven improved, twelve unimproved or stationary, and fifteen died. Of the 105 remaining under treatment, 63 are males, and 42 are females.

From the tables we make the following deductions: From the opening of the Institution, on the 1st March, 1852, to October, 1855, there had been admitted 268 patients, of whom, for various reasons, 163 had been discharged. Of those in the married condition, there were nearly an equal proportion—59 males and 52 females. But of the unmarried or single, there were four times as many males as females; while again of widows and widowers, the proportion was equal. Of course no deduction can be drawn from this, as there may be a greater reluctance on the part of friends to commit their insane female relatives to the institution than the males. But if such should be found to be the propor-

tion between the male and female, single, it would be an interesting inquiry, why is this? And after all the investigation, it may probably be traced to the differences of occupation, and the comparative freedom from the cares and anxieties of life on the part of the female. The age of life at which insanity seems most likely to occur, is between 20 and 35, as one-half of those admitted became deranged between these ages. This rule operated as well in the one sex as in the other.

Whilst there may be an infinity of causes which would disturb the healthy action of the brain, yet there are some which would seem to have a stronger tendency that way than others. Thus from ill-health, there were 20 males to 29 females. From religious excitement, 15 males to 7 females; from intense mental application, 12 males; from onanism, 12 males; from intemperance, 15 males; from hereditary predisposition, 16 to 14.

But as the Superintendant, Dr. Cheatham, remarks, very little reliance can be placed upon the tabulation of assigned causes of Insanity.

Of occupations, some interesting features are presented in table IX. Why, of the 268 cases, 138, or more than one-half, should be farmers and farm-laborers, and farmers' wives and daughters, is hard to understand. Admitted to be the most healthful and most innocent occupation which can engage the attention of man, it is a subject worthy of inquiry why such a great proportion of the insane come from that class. We would fain believe that there was some mistake in this estimate.

Next in degree of susceptibility are lawyers, their wives and daughters; then come school-teachers, of both sexes; then merchants, their clerks and wives; these four occupations embracing 185 out of the whole number, 268—or two-thirds—while the remaining 83 were distributed among 40 other occupations.

We wish we had space to republish the authorities cited by Dr. Pliny Earle, and reproduced in this Report, to correct an erroneous notion respecting the early treatment of Insanity. They relate to the injudicious use of blood-letting, so strongly contended for by Dr. Rush. We will, however, insert a few of them:—

"General bleeding, which was once considered indispensable in

acute mania, was utterly discarded forty years ago by Pinel, is practiced with increasing caution and distrust by the English, and is now seldom used in any American hospital."—*P. 5-8, of the Fifth Annual Report of the Maine Insane Hospital.*

"Many physicians, I am confident take it for granted that inflammation is necessarily present, in all cases of acute mania, and the lancet follows the opinion promptly, perhaps repeatedly. It is not insisted that general bleeding is *never* necessary, but I do believe very few cases require it, and thus more injury is done, in most cases, to the powers of the brain than by any other active remedy usually resorted to. Temporary, or permanent dementia often follows this depletion. As arterial action is always unequal, local, instead of general bloodletting, would be as efficient, if not more so, and in my opinion, more safe."—*Dr. James Bates, Superintendent of the Maine Insane Hospital.*

"Each year that I have passed in this extensive field has served to diminish my confidence in an active medical treatment of almost every form of disease of the mind, and to increase my reliance upon moral means. No individual at the head of an insane institution would now think of combatting any form of insanity with the depletory and reducing means once regarded as indispensable. The practice of bleedings, violent purgatives, emetics, vesicatives and derivatives, has passed away before the light of experience."—*Dr. L. V. Bell, Report of McLean Asylum, for* 1841, *p.* 22.

"Regard should be had to the cause of insanity. If occasioned by a blow, or other direct physical injury of the head, or from some sudden and violent mental emotion, while in good health, free depletion by bleeding and active cathartics are useful, and often indispensable. But such cases are seldom seen in lunatic hospitals. We have very rarely considered it advisable to have recourse to general bleeding at this institution. Occasionally, when there is much cerebral excitement, we have resorted to topical bleeding, but more frequently, even in such cases, we derive benefit from placing the feet in warm water, the application of cold to the head, and the free movement of the bowels by laxatives."—*Dr. A. Brigham, p.* 32, *of the Eighteenth Annual Report of the Retreat for the Insane, at Hartford.*

"Of acute mania, we had thirty-eight cases at the commencement of the year, and have admitted one hundred and sixteen during the year. Many came to us in a perfect fury of excitement, raving, struggling and resisting, exhausted by the journey, and having taken no food nor sleep for days.

"In no cases have we found local or general bleedings admis-

sable, but, on the contrary, nutritious diet and brandy punch are generally demanded. We give from half a pint to twelve ounces of brandy a day, and continue it for weeks, as we do in mania-a-potu, the diseases resembling each other in many of their symptoms and post mortem appearances, and admitting of, if not demanding, similar treatment."—*Dr. N. D. Benedict, pp.* 22, 23, *of Eighth Annual Report of the New York State Lunatic Asylum.*

We should guess from the following paragraph culled from the Report of the Trustees, that they were believers in the science of Phrenology. They evidently give it countenance. Hear what they say to the Legislature of the State:

"The system of Mental Philosophy discoveredand established by Gall, and corrected and more fully illustrated by his pupil, Spurzheim, and his advocates, Combe, Caldwell and Broussais, first taught the functions of the brain *correctly*, and the manifestations of its disease.

This science teaches that the brain is the organ of the mind; that it is *not* single, but consists of a number of independent faculties; that one or more organs may be diseased, and the others not; which explains Monomania, dreams, *et cet*:—that the shape of the brain may be learned from the shape of the skull. It teaches the location and natural language of every organ separately, and in association with others, both in health and disease."

Now we would ask, was not the brain *known* to be the organ of the mind long before these Phrenologits lived? They taught, (it is true,) that different parts of the brain possessed different functions, or that "the brain consisted of a number of independent faculties." And by directing attention to this organ they may have caused more to be known about it than otherwise would have been. But there are needed a few more arguments to sustain their opinion, that "one or more organs may be diseased and the others not; which explains monomania, dreams, *et. cet.*" That the brain is the seat of mind, no one will deny; that it possesses different faculties is discernible to all, and that one of these faculties may be cultivated or strengthened, to the *loss of power* in some other is also clear. But this is no reason for the belief that these faculties reside in separate compartments of the cerebral substance; and moreover, no one has yet ever dissected out these several compartments of the brain. There is no pia mater or du-

ra mater, or arachnoid membrane running down between them, just where the divisions should be. And all the facts deducible from Phrenology, are as readily deducible from the idea that the *brain is single*, whilst its faculties may be diversified. Neither do we admit that "the humane, enlightened, and eminently rational mode of treating insanity" any more followed as a natural consequence of the advocacy of Phrenology, than did the treatment of any other disease of the human system. The change was effected by observation and experience, as all other rational modes of treating diseases are effected. Nothing was more natural for a close observer and reasoner, as PINEL was, than to reject that mode of treatment which made the patient worse, and adopt that which resulted in his restoration. He reasoned doubtless that the mind was inherent in the brain—that its healthy condition assured a healthy action—that if diseased, its functions were impaired, and there was a loss of mental energy. He had seen the mind impaired as a consequence of various diseases, and gradually restored as the diseases were removed—and he was led to infer that whatever the cause, the remedy would consist in a course of treatment which would divest it of its diseased action—and so PINEL, independent of the science of Phrenology, gave to the world "a humane and enlightened and rational mode of treatment," which those after him pursued.

But we are done, when we have said, that much credit is due to that humane woman, Miss Dix, who urged upon our Legislature in 1849 the erection of a new Hospital for the Insane. Much is due to that and succeeding assemblies, who appropriated liberally towards the enterprize. Much to the able *commissioners* first appointed to select a site and erect buildings—much to that energetic individual, Dr. John S. Young, who visited the Institutions of the North and selected that plan which was adopted, and superintended its erection. Much to Maj. A. Heiman, who, in this and in many other public buildings in Nashville, has displayed his skill as an architect. Much to the Board of Trustees for their supervision over the Institution, and their judicious selection of a Physician and Superintendent—and much to that Physician and Superintendant, Dr. Wm. A. Cheatham, who pos-

sesses the energy, is endowed with the proper spirit, and has the peculiar talent to carry out, to the welfare of the patients, and the interests of the Institution and the credit of the State, the design of the noble charity over which he presides.

ART. XII.—AN ACCOUNT OF THE EPIDEMIC DYSENTERY WHICH PREVAILED NEAR SALEM, RUTHERFORD COUNTY, TENN., DURING THE SUMMER OF 1855.

BY M. RANSOM, M.D., OF SALEM, TENN.

SALEM, TENN., DEC. 6, 1855.

DR. J. W. KING—*Dear Sir:*—In compliance with your request, I will now give you an account, as concise as possible, of the epidemic of Dysentery with which our section of country has been visited during the past summer.

It commenced about the 1st of June, and continued with very little abatement until about the latter part of August. There were three tolerably distinct classes of cases, all presenting different symptoms, running a different course, and requiring different treatment. More than one-third of the cases were unattended with fever, not even confined to bed, and retained the appetite throughout the attack. They recovered generally in one or two weeks, under any kind of treatment, or none at all. Then again we had a second class of cases, attended after the first day or two with high fever, full, bounding pulse, loss of appetite, coated tongue, and torpid bowels. There was more tenesmus and general complaint in this form of the disease than any other. This class of cases under proper treatment, invariably terminated favorably in from one to three weeks. In several families, the disease assumed no worse feature than the above. This form of dysentery has for several summers prevailed epidemically in different parts of our county. The third class of cases, which I shall more particularly notice, comprised nearly one-third of all the cases, and was very fatal—more so than any epidemic disease with which I have ever before met, except perhaps malignant cholera. It was chiefly confined to the black population. I saw no case among children under five years of age, nor among adult males.

The first symptom of the disease was ordinary dysenteric discharges, about which I could discover nothing peculiarly characteristic of this form of the disease. Fever soon followed, with a hot, and at first, generally a dry skin, pulse quick and rather small. Tongue, for several days, and at the most dangerous crisis, presented very little indication of disease. Countenance, for several days, quite natural. Generally very little abdominal pain or tenderness, and comparatively but little tenesmus. The bowels were easily moved by purgatives, and the strength was rapidly reduced by them. Diarrhœa frequently supervened in the worst cases about the second or third day. The vital powers now rapidly failed, the pulse became hourly quicker and weaker, sweatting profuse, and the surface icy cold. The discharges now became, usually, of a dark, muddy appearance, and gangrenous fœtor. Frequent deep sighing, with a restless tossing from one side of the bed to the other, are frequently observed very early in the attack. Collapses in the fatal cases, generally come on between the second and fourth day. They were generally entirely pulseless, (at the extremities,) for one or two days before death, and even preserved in that condition a remarkable degree of strength. Those who recovered, if not collapsed, were in a condition bordering upon it for several days. The announcement was declared by the cessation of the excessive sweating, and diminution of the frequency of the pulse. A continued fever, very much like our most common form of typhoid fever, now followed this great depression of the vital energies. The tongue becomes dry, red and smooth, and the bowels often tympanitic. Some patients died in this stage of the disease, but as a general rule, if they passed the first week without sinking into collapse, they slowly recovered.

In making out a plan of treatment, it is very important, at the very outset, to diagnose correctly, between the different types of dysentery. The pulse beyond all comparison was the surest guide. I learned a quick, small pulse in the outset of the attack as the very worst symptom. An early tendency to sweating was seldom met with, except in malignant cases. These symptoms, together with the laxity of the bowels, generally satisfied me as to the character of the case with which I had to deal.

I at first looked upon this as an epidemic of typhoid disentery, but after further acquaintance with it, I regarded it as more properly a *congestive dysentery*. The nervous disturbance in our typhoid diseases differs very wide from the overpowering of the nervous system, which is so clearly evidenced in this disease. Almost all the fatal cases are in a state of collapse within one week after the attack. The tongue does not present the dry and pointed appearance as in typhoid fever. True, we find the typhoid tongue and fever in the second or third week, after the main force of the disease is exhausted, and the crisis passed, but may this not more properly be regarded as a consecutive fever, arising from the information and ulceration of the intestinal mucous membrane, which must be expected to result from the congestion preceding it. This is more probable, as this consecutive fever is directly proportionate to the degree of congestion. I have seen four or five cases react from a pulseless state of collapse, and but one survived the consequences, and that, with every symptom of mucous enteritis, and with a tardiness sufficient to have exhausted the patience of typhoid fever itself. Mortification is almost always the result of this degree of congestion, as is evinced by the fetor of the discharges in those cases.

I will only speak of the *treatment* of the malignant Dysentery. The first case that came under my treatment, had already been bled, (about a pint;) she sank into collapse, and died in a few days. In the cases immediately following, and in which I was assisted by Dr. Avent, of Murfreesboro, we commenced the treatment by a few laxative doses of sulphate and carb. of magnesia, followed by opiates, in moderate doses, and opiate enema. To this soon succeeded stimulants, as camphor, ammonia, turpentine, and brandy, according to the state of the pulse. Frictions of turpentine and pepper were applied to the abdomen and extremities, and blisters in the worst cases were applied to the abdomen. This treatment I adopted with slight variations, for several weeks, and by the persevering and judicious use of those stimuli, several cases were conducted to a favorable termination, in which there was a decided disposition to collapse; but in the more violent cases, this treatment was totally inadequate to the cure. The largest doses of brandy had no perceptible

effect upon the sinking pulse. Under those circumstances, I commenced the use of quinine. Where there was already a good deal of sinking, I gave 6 grs. every three hours, until its impression was obtained, and afterwards continued it in sufficient doses to keep it up. Brandy was used freely, and opiates in *small* doses, with blisters to the abdomen, and turpentine frictions to the spine and extremities. I employed this treatment in all the cases with which I afterwards met, with entire success, and some were certainly as unpromising as any that I had before seen—one indeed in a pulseless condition. In cases in which were early manifested symptoms of malignancy, I commenced the use of the quinine at the very outset. Two grs. every two hours, so as to give twelve or fourteen grs. in the early part of every day, was generally sufficient with the adjuvant treatment to conduct them safely through the critical stage of the attack. It was sometimes necessary to continue it in this way for several days in succession. I gave it without regard to remissions, as there were no distinct remissions. The only contra-indication for it was a full pulse.

I think that large doses of opium are inadmissable in this form of dysentery; both on account of its narcotic and relaxing effect, since it requires all our efforts to rouse the nervous system to action, and preserve the tone of the contractible tissues. From the same cause, I have observed patients sink more rapidly when much exposed to moist heat. It is generally sufficient to give ten drops of tinc. of opium, several times a day, assisted, if necessary to relieve tenesmus, by enema of one or two grs. of opium in mucilage.

I have never seen any marked benefit from astringents administered in either way, in any form of dysentery, unless where there was hemorrhage from the bowels, of rather an active character. After the disposition to collapse is overcome, or after reaction from it, we have usually to treat the enteritis with the consecutive fever. The treatment of this stage of the disease which succeeded best in my hands in a general way was a mixture of turpentine and laudanum in chalk julep, with an occasional dose of Hydrarg. cum creta and repeated blistering of the abdomen.

Very respectfully, &c., &c.,

M. RANSOM.

ART. XIII.—EVANS' PRACTICE.

TWELVE MONTHS' PRACTICE IN THE CAEROKEE NATION, WEST.

BY J. P. EVANS, M.D., LATE OF TAZEWELL, TENN.

(Continued from page 330—Vol. III.)

CASE 129.—*Gastric Int. Fever.*—Aug. 21st. Mrs. Barker, aged between forty and fifty years, the mother of several children, (some of them adults,) living near the foregoing case, had been afflicted for several days with intermittent fever. In addition to the usual phenomena, which were uncommonly severe, the case was marked by a protracted hot stage, with almost a constant nausea, retching and vomiting during its continuance. Purgatives had been taken on the first and second days of her illness.

℞. The vomiting subsided under the influence of two or three ⅓ gr. doses of the acetate of morphine, and the application of sinapism over the epigastric region; and 20 grs. of the sulphate of quinine in six portions, given during the intermission, arrested the disease promptly. She suffered several relapses, which were broken up in a similar manner.

At the time of my first visit, she complained of having suffered with excessive menstruation, accompanied, as she believed, with true hemorrhage, at several previous catamenial periods. Her name will again appear in these notes, as the subject of a severe and fatal uterine disease.

CASE 130.—*Squamous Disease of the Skin.*—Aug. 24th. Miss C. N., aged about twenty-nine years, had had a chronic affection of the face, consisting of *squamæ on a red surface*, situated on the sides of the nose, and extending over a part of the malar projections. The morbid cuticle had continued to scale off in continuous succession, except during interruptions of short duration, brought about by various appliances.

℞—Iod. potassium, - - - 10 grs.

Water, ʒ. A tea-spoonful three times a day.

For a wash, the "Twigg hair-dye," (in which spring water was substituted for rose water,) was prepared—acetate of lead and milk of sulphur.

Sept. 6th.—The disease had almost entirely disappeared; but she had found that on leaving off the remedies a few days, the redness and scales, to a very small extent rëappeared.

℞. The same as previously, except that the compound tincture of iodine was given instead of the hydriodate alone.*

The remedies were pretty regularly continued for several months; and during my absence from the country, the same compounds were procured of another physician. Up to April, 1855, there had been but a slight return, and the lady's appearance was greatly improved.

Case 131.—*Rheumatic Affection.*—Aug. 24th. Mrs. Joseph Vann sent for medicine for a painful affection of the limbs; no other history or description was given, except that there was no swelling or redness.

℞.—Tinc. colchi. sem.,
Water, ääa 3 parts,
Tinc. opi. 2 parts.

A tea-spoonful three times a day. The remedy had a good effect. In several cases of a subacate form, in which but little general derangement could be detected—articular pains, especially of the shoulders—I have seen removed speedily by tinc. colch. sem. and laudanum, when the latter had failed.

Case 132.—*Congenital Syphilis.*—Aug. 24th. A male child, only a few weeks old, offspring of a woman of bad repute, was brought to me for treatment. It had ulcerations on various parts of the body, but most extensively and severely about the neck and genital organs. They were of various sizes, from the dimensions of a pea to those of a dollar. They were secreting an imperfect pus, and had the callous elevated edges and firm bases, characteristic of chancres. The child was also afflicted with periodic fever.

℞.—Iod. potas., ½ gr., in water.
Calomel, ¼ gr., three times a day.

Sulphate of quinine was given to arrest the periodic fever.

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* The term *hydriodate* is used advisedly, in reference to an aqueous solution of the salt.

Calomel was freely sprinkled over the ulcerated surfaces, and yellow ointment furnished for dressing.

Under this treatment the child rapidly improved, and in two or three months all vestige of the syphilitic affections had disappeared.

Case 132.—*Malignant Remit. Fever.*—Aug. 24th. A son of Adam Seabott, aged seventeen years, had been sick three days. The attack had been ushered in by chilly sensations, of short duration; febrile excitement was of a high grade, and very slight morning remissions had been observed. Vomiting and purging had been almost incessant, and had induced alarming prostration, and caused the father to send for Dr. Noel and myself at the same time, who resided equi-distant in opposite directions. Dr. N. had preceded me a short time.

Arrived early in the night, and found him with clammy sweat, pulse more than 100 to the minute, and incessant thirst; nausea, vomiting, purging and head-ache. The paroxysms were renewed every forenoon.

R. Sulphate of morphine, ¼ gr.—to be repeated if the stomach and bowels required. S. quinine, 30 grs., in six portions—one to be taken every two hours.

In less than two hours the gastric and gastro-intestinal irritation had subsided, and also head-ache; and the perspiration had become warm and thin; before morning the circulation was almost natural, and, in short, there was an intermission. Jugulated. No relapse.

August 25th.—Case 133.—*Intermittent Fever.*

" " " 134. " "

" 26*th.* " 135. " "

" 28*th.* " 136. " "

The first of the group was a boy, aged ten years; the second, a married woman, aged eighteen; the third a widow, aged thirty-five; the fourth, a Digger Indian boy, from the Humboldt mountains, aged, as supposed, eight or nine years. Neither of them had taken any medicine. Broken up with the sulphate of quinine alone, and there was no relapse in either case.

Case 137.—*Malignant Uterine Tumor.*—Aug. 26th. Mrs.

Scott, wife of Sterling C. Scott, aged near forty-five years, the mother of several children; distance, eighteen miles; has been afflicted with a uterine derangement for several years, of the nature of which she was unacquainted; it had been attended with painful menstruation; but her youngest child was only a few months old: and from its birth she had began to feel lancinating pains, (but more frequently a burning sensation,) which she attributed to the result of severe parturition, or excessive and awkward officiousness of the mid-wife. From that date a purulent, or what she supposed to be leucorrheal discharge, had set up. Until this profluvium, blood had occasionally appeared, during a few months past. For several weeks she had been entirely prostrated, and under the combined influences of the vaginal discharge, excruciating pains, loss of rest, and hectic fever, she had become extremely emaciated. Micturition could only be effected in the erect position, and defecation was somewhat difficult and painful.

Examination revealed a huge tumor, occupying the whole of the vagina, pressing against the urethra in front, and the rectum posteriorly; making considerable lateral pressure, and slightly protruding forward so as to separate to a small extent the labia pudendi. It seems to be almost as large as the head of a full grown fœtus, very hard and firm in its structure, covered with lobular irregularities, and deeply ulcerated at several points. The discharge emitted an extremely offensive odor. By using some force, I succeeded in sweeping the finger around, so as to pretty well ascertain that it had its origin at the cervix uteri.

It would be superfluous to detail the treatment, as it was only intended to be palliative. Opium was the principal agent given internally, and a solution of chlorinated lime was valuable as a corrector of the offensive odor emanated from the profluvia.

Case 138.—*Jaundice.*—Aug. 26th. A son of Rev. S. Foreman, age not recorded, but under sixteen years, had an icterode condition of the skin and eyes, without any local pain, except when pressure was made over the epigastrium, which betrayed tenderness.

℞.—Bitartrate of potassa,
Sublimed sulphur, ä ä. Mix.

A tea-spoonful, heaped, night and morning. Effervescing draughts occasionally, of carb. soda and tart. acid. Unstimulating diet. Health was rëestablished in a short time.

Whilst the volunteers of the 4th Tennessee regiment were encamped at Molino del Rey, (near the city of Mexico,) during the winter and spring of 1848, between forty and fifty cases of jaundice were reported. They were all, apparently, of the non-malignant character of the case just described. Among the first cases was that of the Assistant Surgeon, who was incapacitated for business for more than two weeks. During the first week he resorted to moderate doses of calomel, rhubarb, and blue mass; he seemed to grow more languid, and the icterode hue more intense after the action of each dose of a mercurial. The second week he took a drachm of the sulphate of magnesia every morning, and confined himself to a restricted farinaceous diet; and under this plan he rapidly improved.

In the case I examined, I found tenderness on pressure over the epigastrium; and I formed the opinion that the true pathology of the diseases in the cases referred to, consisted of a subacute inflamation, with some degree of thickening, of the mucuous coat of the duodenum, which extended by continuity to the ductus communis choledochus, diminishing, or obscuring, for a time, its calibre, and thus prevented the free exit of the hepatic and cysto-hapatic secretions. If this be true, agents calculated to increase the functional action of the liver, would add to the difficulty by augmenting the already pent-up matters; and perhaps their action on the imflamed and thickened surfaces, whether depending on immediate contact or not, would increase or perpetuate the inflamation and thickening.

Case 139.—*Dysentery, mild.*—Aug. 27th. A young negro woman, belonging to Mrs. Riley, had been afflicted with distressing dysenteric symptoms—tormina, tenesmus, &c.—for two days, without febrile excitement.

℞.—Opium, . . 15 grs.
Acet. of lead, . 32 grs., divided into 16 parts.

One to to be taken immediately after each alvine discharge. All the medicine was not taken, as the disease soon subsided.

Case 140.—*Hiccough, idiopathic.*—Aug. 27th. Hon. John Thorn made his appearance at my office with an awkward and ineffectual attempt to fix a smile of mirth on a lengthened and gloomy visage, on account of a frequent spasmodic involuntary inspiration called hiccups, resulting from spasms of the diaphragm. Judge Thorn is a temperate man, and could give no account calculated to throw light on its origin, except some fatigue by riding in the sun. It had commenced the day previous, subsided at night, and recommenced this morning.

℞. A tea-spoonful of pure sulphuric ether (letheon) suspended the morbid action for an hour. The affliction subsided the next day, under the use of pulverized camphor, principally.

Case 141.—*Int. Fever, with convulsions.*—Aug. 27th.—A negro child, the property of Mr. John Ross, had had intermittent fever for two or three days. To-day, on the accession of the hot stage, a severe epileptic convulsion took place. Some hours afterwards I saw the patient.

℞. Dulc. spts. nit., twenty drops every two hours, in water. During the night and early part of the forenoon, to take ten grains of quinine, in six portions. No other febrile paroxysm, or convulsion occurred. No relapse.

Case 142.—*Remittent Fever.*—Aug. 28th. Lucy Natchez, aged about twenty-two years, part Cherokee, Muscogee, and white, had been sick some days, with remittent fever, attended with nausea, vomiting and purging; remissions slight; distance fourteen miles; arrived early in the night.

℞. Acet. of morph., ¼ gr., immediately, and two similar doses, to be taken in case the first did not suffice.

S. quinine, 30 grs., made into twelve pills; two to be taken every two hours, commencing at 9 o'clock.

The gastro-intestinal irritation subsided under the influence of the first dose of acetate of morphine, and did not return. I did not remain more than an hour. The quinine was given as directed, and there was no return of fever. Convalescing rapidly. No relapse in any form.

In this case I was guided by the same reasoning as in other cases of similar character; a choice between two plans:—first,

alimants, alteratives, and diaphoretics, followed, (as they would have been) by a succession of paroxysms, each of which would have deranged the functions of the important organs, to as great an extent as they were previously deranged; or, secondly, the prompt admiuistration of an efficient antiperiodic, followed by a rapid subsidence of the disease.

When the general diseased condition is allayed, the minor, or local derangements consequent on that general diseased action, subside in detail, with a rapidity proportioned to the sensibility, complexity, and habitudes of the parts deranged. When the periodic fever has not been suffered to progress over two or three days, (as a general rule,) the important organs soon regain their normal condition.

Case 143.—*Intermittent Fever.*—Aug. 29th. Mrs. Jennings, aged about eighteen years, in the last months of gestation, had had two or three paroxysms of intermittent fever, of the tertian type. She had taken no medicine.

℞. S. quinine, 20 grs., in six portions—all to be taken during the latter third of the intermission. Jugulated.

No uterine disturbance took place, and she went to her full time. Had a purgative been given, such disturbance would more likely have taken place. A large majority of cases of abortion and miscarriage, which have fallen under my personal observation, were traceable to spontaneous purging, or the action of cathartic medicines. This lady relapsed several times during the fall, but ceased to do so on the approach of cold weather. The quinine was repeated at each relapse.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Clinical Lectures on Surgery. By M. Nelaton, from Notes taken by Walter F. Atlee, M.D., Philadelphia. J. B. Lippincott & Co. 1855.

Issued in a style uniform with that of Simpson's Obstetric Notes, by the same Publisher, this volume is worthy of a place by the side of that valuable work on the table of every Physician. As the book purports, these are the observations of Dr. Atlee, whilst traversing the wards or cliniques of the Parisian Hospital, listening to the lectures of that distinguished surgeon Nelaton. The style of the work throughout bears the impress of this off-hand mode of lecturing—and the Editor, Dr. Atlee, has permitted Professor Nélaton all the time to speak for himself. Throughout we read Nélaton speaking through an Amanuensis. For this Dr. Atlee should be commended, as by this course we are made acquainted with Nélaton himself. But it must be admitted that it is difficult for a hearer to express in as clear and forcible language, the thoughts and expressions of the speaker, as he could himself do it—there being somewhat of the same stiffness about such works as inevitably befalls translations. The two may indeed be regarded in the same light.

Surgery is an important branch of the science of Medicine, and for various reasons, surgeons should be thoroughly prepared and competent for the duties which they undertake to perform.

Unlike the practice of medicine, or the cure of cases, the practice of surgery, or performance of operations, is more public, requires more presence of mind—a greater quickness of thought and action, and is more immediate in its effects, either for weal or for woe. Successfully done, it attaches more credit and more reputation than the cure of a case of fever or pleurisy—whilst bunglingly performed, and unsuccessful in its results, it tells more severely upon the future prospects of the operator than would the loss of a dozen cases of fever or pleurisy. A thorough knowledge of what he is going to do is all-important therefore to the surgeon. As has been said truthfully by some one, he must have

an eagle's eye, a lady's hand, and a lion's heart, and then with these and with wisdom to direct, the path of preferment and of honor is open to him. Nothing is more common than the expressions, *bold operator*, *timid operator*, and yet these characteristic adjectives are not characteristic of the man. Boldness does not imply skill—neither does timidity imply a want of it, and yet the first will succeed when the other will not. Some men naturally are afraid of any step in the cure of a case, which will require them to inflict pain—and hence the opening of an abscess or the use of a lancet for any purpose, fills them with trepidation—while others again approach the boldest and most hazardous operations as coolly and deliberately as the anatomist does his dissections. He performs his operation by a grand display of knives and other appliances—cuts away into quivering human flesh, dissects out a tumor perhaps, and then exultingly hurls it over the heads of a half hundred of students to the farthest side of the amphitheatre, as much as to say, see there, I did it.

But the most timid may be emboldened, and with knowledge as the groundwork, by *patience*, *perseverance* and *practice*, he too may become *perfect* in the surgical art.

As a guide, we would direct them to this new work of Prof. Nelaton. It is comprehensive, for in the twenty-three chapters into which it is divided, may be found discussed nearly every surgical subject of importance. It is useless to specify each one, sufficient for our purpose to direct attention to a few special points. In treating of fractures of the thigh, M. Nélaton used Martin's apparatus in a case of twenty-eight days' standing—a slight shortening had taken place. "This apparatus of M. Martin is exceedingly complicated. When it is applied, the thigh is in a flexed position; the leg is fastened below, and counter-extension is kept up by two bands passed in the groins and fastened above. The traction upon the fractured extremities of the femur is regulated by screws, properly adjusted for that purpose. It is an apparatus of permanent extension, used on a flexed limb." But it gave pain—threw the man into a fever, and after twenty-six days was renewed, and no benefit had been derived. A *dextrine* bandage was then applied, and after two and a half months

he was discharged, cured. The mode of preparation of this *dextrine* bandage is thus described on page 169:

"Dextrine was first used by M. Velpeau, in place of starch, in the preparation of immovable bandages. The best mixture is composed of a hundred parts of dextrine, sixty parts of spts. of camphor, and forty parts of water. These proportions are those that give the greatest solidity, and that permit the apparatus to dry most rapidly. These substances should be mixed in the following manner: The dextrine being placed in a basin, the spirits of camphor (or ordinary brandy) is immediately added, and worked up with it until the mixture has acquired the color, consistence, and transparency of honey; this done, the warm water is added, and after one or two minutes of agitation, the solution is accomplished, A circular bandage is soaked in this mixture, carefully pressed, and then applied to the limb, previously covered by a dry bandage. The exterior is then coated with what remains of the mixture.

In order to facilitate the drying of the apparatus, the limb is suspended in three or four bands, attached above, and coated with cerate, so that they may not adhere to the apparatus as it dries."

Again on page 172, our author says:

"*When the Surgeon examines a patient, he should not make him suffer*," and being published in *italics*, he meant to be emphatic in the expression. *Pain* is a symptom in many surgical diseases or accidents—at times being very intense, and in others so obscure as to be aroused only by the movement of the limb, or by the tactile examination of the surgeon. It is such an unusual attendant, that it seems difficult how an examination can be effected without pain. We do not mean to say that the surgeon should seek to give pain, but that in the course of his examination, he cannot avoid it, and it is to him an important pathognomonic sign. It may be true that in cases such as were then under examination, fracture of the leg, *crepitation* should not be sought after, for as our author remarks, "there is another sign, quite as good as crepitation, which is *abnormal mobility*."

In fracture of Patella, "the leg is placed in extension, and then the parts having been previously oiled, *as quickly as possible*, bandages soaked in plaster were applied." The mixture used was composed of equal parts of warm starch, and of very dry plaster of Paris. It has the advantage of becoming solid almost instantaneously.

Allusion is made to Malgaigne's instrument for preserving a union between the pieces of a fractured patella. It is a double tenaculum, one hook being fastened into the tendon above, and the other into the ligament below, and then by a screw, these hooks are made to approximate and fixed. It gives no inconvenience.

We turn to another portion of this excellent work—that which relates to those uterine diseases requiring surgical operations. There is in the treatment of this class of diseases generally more routine practice, and more charlatanry than is displayed in any other department of the profession. The Obstetrician, the Surgeon, and the Practitioner of Medicine, all have a turn at them, and yet notwithstanding the combined force, the prolonged suffering and protracted ill-health of the poor female has found no abatement. Too frequently also, one Physician is called to repair the damages entailed by another. Not that we ascribe all the displacements of the uterus to mal-practice, or that all the maladies, to which the female is subject, are attributable to such displacements. But the every day experience of nearly every Physician will confirm the statement, that an officious intermeddling with these displacements very frequently aggravate rather than benefits them. For it is the belief of too many that instrumental treatment is the *sine qua non* in such diseases, regarding the womb as the faulty member in every respect, and believing that if it be once restored to its proper position, and kept there, all will be well. On the contrary, we ask, in all candor, does not general debility, proceeding from what cause it may, often lead to a relaxation of the soft parts, and very often bring about a displacement of the uterus, of some sort or other? And is not this a natural consequence of the manner in which that organ is situated among the abdominal viscera? It has no connection whatever with any surrounding membrane, but is situated with its fundus, or heaviest part, upward, retaining that position in the healthy female by its own inherent strength. Remembering this, how necessary it is to adapt our treatment *primarily* to the restoration of that lost strength, by a judicious and persevering use of tonics internally, and of injections of an astringent na-

ture per vaginam. And yet such is the obstinacy of some cases, that the obstetrician has to become the surgeon, and resort to appliances *to aid nature* in effecting a cure.

In *prolapses uteri* our author presents a variety of modes of surgical treatment. He says:

"The replacing of a prolapsed uterus is sometimes quite difficult; the chief means are prolonged dorsal decubitus. In order to maintain the organ in its normal position, pessaries are used; but they are inconvenient to wear, and, moreover, cause vaginal discharges. It has been attempted to bring this about by the production of cicatrices, in order to cause the contraction of the vagina. In order to form them, cauterizations were employed and advised by M. Velpeau,* but they have been abandoned. A portion of the tissues of the vagina has been cut away, and union made to take place by first intention between the edges; several operations have been recommended for this purpose; but although they appear very rational, they are never practised at the present time. It has been advised to seize hold of many folds of the vagina by means of serre-fines, and to leave them in place until they fall. The operation is one of extreme simplicity; it is unattended with danger, and M. Nélaton said he would try it.

"By means of a long pair of forceps, ten serre-fines were placed in two rows in the vagina, five on the anterior wall, and five on the posterior; the patient experienced no inconvenience from the operation. The first serre-fine became loose from the effect of the ulceration and destruction of tissue it caused, at the expiration of seventeen days, and the last on the twenty-fourth. The patient walked and felt very much benefitted; the uterus remained in its normal position, but it was thought proper to repeat the operation. Eight serre-fines were applied this time; they had all come away at the end of fourteen days, and the result was very satisfactory; if there were not reasons for mistrusting the persistence of the cure, the patient might have been sent away as cured; she was walking about, and able to make her bed, the uterus all the time continuing in its proper place. Eight serre-fines were again applied, as at the second time, as a matter of pure precaution, and soon after they had come away, at the expiration of twenty-one days, the patient left the wards cured.

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* M. Velpeau first introduced the actual cautery into the vagina, for this purpose; but M. Gerardin cauterized the vagina in 1823, or thirteen years before Velpeau's operation.

In the vagina could be felt the folds and indurations caused by the application of the serre-fines."

Again our author thus expresses a few causes of *prolapsus:*

"The cause of prolapsus is sometimes the great dimensions of the pelvis; sometimes the great size of the orifice is said to cause it; but that could do nothing without a relaxation of the uterine ligaments."

The method of cure employed by Dr. Nèlaton is that of Dr. Desgranges, of Lyons, and is expressed in the foregoing extract from the work. These serrefines we take to be minute-clamps, which catch and hold folds of the vagina till inflammation takes place, and consequent ulceration, thus producing a narrowing of the vaginal walls. M. Nèlaton fixes these small instruments through a bi-valve speculum. This method of Desgranges was advanced by him in 1852, in a memoir "On the Treatment of Falling of the Womb, by a new method," and was by him called *pincement du vagina—pinching of the vagina*—a name which plainly expresses the operation—a continued pinching or pressure being exercised by small forceps or clamps upon a fold of the vagina until it is mortified, the immediate result being a narrowing of the vaginal walls, the remote that of causing the womb to regain its proper position and retaining it there.

Our author offers the following *résumé* of the eight cases treated by this new method:

I. In no case did death follow, not even a single instant of apprehension; there was complete absence of local disorders.

II. Prolapsus of the uterus is not an incurable affection, but yields to means, which constitute a *new method*, insomuch as nothing resembling it is to be found in former treatises.

III. The treatment of prolapsus is susceptible, also, of modifying with advantage other displacements and flexions of the womb.

IV. The cure is due, probably, less to the narrowing of the vagina than to an organo-plastic process, which, propagating itself beyond the organ, restores their lost tenicity to the utero-sacral ligaments, and to the cellular tissues of the pelvis.

V. The treatment does not prevent cohabitation nor fecundation; and it cannot become a cause of difficult parturition.

VI. If the cases reported are not as yet sufficiently numerous to make the method complete, those already published are abun-

dantly sufficient to establish its perfect innocence, and to authorize legitimate hopes."

Once more before we lay aside this work: On the subject of Mammary inflammation, M. Nélaton differs from those who entertain the belief that it is caused by impression of cold, in his opinion the phlegmonous inflammation being determined by a chap on the nipple. He thinks that the affection is an angeio leucitis.

"Almost all the lymphatics take their rise in the nipple and the areola, and go into the partitions between the glandular tissues; and it seems as if the inflammation propagated itself in radii, just as the lymphatics are in radii. M. Nélaton said he was not perfectly satisfied, as to the correctness of this doctrine, but he thought he was right.

"In order to open the large abscess, which the patient had when she came in, M. Nélaton waited as long as he could, and then made but a small puncture, and into its lower portion. Some surgeons give just the contrary advice, to open early, and by a large incision; but by retarding the opening, you do not have those crooked, winding connections to the abscess; there is but one sac, vast, but regular. In spite of the size of the suppurating surface, M. Nélaton thought it would soon be closed, when, as has been remarked upon above, a new abscess formed in the neighborhood; when this was opened, cicatrization took place with extreme rapidity. There are some abscesses, whose sides have a great tendency to unite; and those of the breast are among the number. M. Nélaton said he could not call the attention of the class too much to these abscesses; be slow in opening them, and then do it in the inferior portion."

But we have extracted enough—we have said enough to convince our readers of the value of this new claimant for professional favor. R. O. C.

Scenes in the Practice of a New York Surgeon. By Edward H. Dixon, M.D., Editor of "*The Scalpel.*" For sale by John York & Co., *Nashville, Tenn.*

The volume before us may be regarded as "a successful attempt to popularize medicine, by the attractions of tragedy, comedy and the strategy of literature," and with much taste the author says "to my morning and evening stars, Stella and Julia, without whose light my sea of life had been pathless, these pages are dedicated."

For Scenes in Northern and Southern practice, the author, in his prefatory remarks, acknowledges his indebtedness to Dr. Dewees, of New York. For Scenes in Western practice to Dr. Richmond, of Ohio, for those in City practice, and all other portions of the volume, Dr. Dixon is alone responsible. The book as a whole is made up, as is usual now-a-days, by selections from a periodical. This is from the "*Scalpel*," the editor of which acceded to the handsome terms proposed by the publishers, Messrs. De Witt & Davenport, for the purpose of making the selection from six volumes of its pages.

The reader commencing with the first article—"The Cholera of '32—The Broadway work-women—The Young Mother—The last day's work—Terry's Courtship," and closing with "The early History of Fort Lee," will find ample resources for amusement and improvement. With a view, however, of furnishing a more definite idea of the character of the work, we will barely introduce our readers to Biddy and Terry's troubles, and then pass on to something of more substantial worth. Biddy was a young Irish girl, and Terry was her "laddie." Having courted Biddy, and awaited the time appointed for her decision, Terry heard with sorrow her refusal, and thereupon swallowed an ounce of laudanum, and was mixing a powder, as Biddy hastily took her exit, and with a "wild shriek and an och hone, and ah, murther, and hulla loo—a hulla loo—poor Terry! Ah! why did I tease ye?" burst into the doctor's office, upsetting the servant and laying hold of the Doctor, exclaimed, "Ah! Docther, Docther, come now, for the love of the murther that bore ye, come this minute; I've killed poor Terry, and never again shall I see him. Ah! murther! murther! why did I plague ye?"

The Doctor tried, but in vain, to pacify the almost frantic girl, and drawing on his boots, he soon found himself a quarter of a mile distant from his office, in a wretched tenement, and in full view of a living Irishman, standing on the stairs that led to his miserable chamber, with tea-cup in hand, and a broken scissors, stirring busily the contents. There, in defiance of the Doctor, Biddy and all, stood poor Terry, in his red shirt and blue stockings, and in an attitude of the grandest kind, still flourishing his tea-

cup and stirring up the *rats bane*, refusing to let the Doctor come near, and exclaiming from time to time, "Ah! Biddy, will ye have me? Ye'll have now, will ye not?" * * * "Sure wern't we children together? and didn't we take our pataties and butther milk out of the same bowl, and yer mother that's dead always said ye were to be my wife! And now ye're keeping company with that dirty black-guard Jemmy O'Connor: * * Ah! Biddy will ye have me?"

The invidious manner of mentioning the name of Jemmy O'Connor, who had some winning ways about him, made Biddy's blood boil, and with great earnestness, she declared she would never have Terry, when with an awful gulp the poor fellow rolled up his eyes, and with a most impassioned, yet ludicrous look at her, drained the cup and fell upon his knees on the step. Biddy fell down in a fit of hysterics. The whole affair, says the Doctor "was so irresistably ludicrous that I could scarce forbear shouting with laughter." And though he claims to have a high regard for the sex, specially when they have a "fellow feelin," he choosed to let Biddy lie, believing that she indeed suffered justly; presently, however, Biddy revived, and suddenly starting up said, "Ah! Terry! Dear Terry! I'll have ye. Yes, I will, and I don't care who hears me. I always loved ye. * Meg always kept telling me ye'd love me bether if I did not give into ye too soon. Ah! Terry, dear Terry, only live and I'll go to the end of the world for ye! Ah! what would my poor mother say if she was here? Och! hone, och! hone; docther, now, and what are ye doin? A purty docther ye are; and ye pumped out your own countryman that didn't die sure, and he tuk twice as much as poor Terry. Up wid ye now, and use the black pipe ye put down the poor crazy thin's throat over the way last summer. I'd take it myself, if 'twould do."

Fortunately Biddy had made no secret in the neighborhood of Terry's affection for her, and that she valued her charms too highly to entrust them to Terry. And the druggist to whom he went inquiring for "*rats-bane*," more judicious than the first, gave him a quantity of chalk and eight grains of tartar emetic, of course, *it turned out* well.

THE MACKEREL FAMILY, is but a specimen of thousands of others who marry from such considerations as prompted Mrs. Mackerel. The consideration gone—the savory principle removed, and only the Mackerel remained. Mrs. M. is described as a lady of exquisite beauty, well educated, and of fine fashionable appreciation; her husband was a coarse man, with no companionable sensibilities or emotions. But he had money, and she had none. As the money was squandered they quarreled; and as they quarreled she grew nervous by degrees, and the young Doctor was sent for—the same young Doctor who, for so many years, wore his old clothes over again, read a few books and kept a little melancholy unheeded office, he who had neither splendid residence, or silver mounted harness, and whose bays "were yet in dream land eating moon-beams"—yet most opportunely for the Doctor, on this occosion, having just returned from a wedding, he was dressed in the highest style of fashion, and just as he was about to retire, a furious ringing of his door-bell made him feel particularly amiable, and a servant announced the sudden and alarming illness of Mrs. Mackerel, and that in the absence of their family physician, Mr. Mackerel desired his services. This being his first call to a lady of position, the Doctor determined to do his prettiest, and giving his hair an extra touch, he followed the servant, and entered the richly decorated chamber. Mr. Mackerel, in the speechless condition of his wife, took an early opportunity to inform the Doctor, and very prettily too, of her sudden attack, remarking "he supposed that the dancing, the warmth of the room, and the supper combined, must have produced exhaustion of the nervous system," &c., &c. The Doctor was at once prepared to "realize the powers of ice cream, cakes, oranges, punch, chicken sallad, oysters, champagne, sugar plums," etc., etc.; but the blending beauties of complexion—the placid features, the heaving bosom, and agitation of pulse, soon dissipated the truthfulness of these impressions. The Doctor visited her daily—her recovery was tardy, and she left for Saratoga. The following week the sheriff took possession and sold out the effects. The Doctor could not prescribe, or at least could not administer the needed remedy. Money sufficient to

have kept her in better company than home afforded. Money! to have bought perpetual pleasure at Saratoga and elsewhere in fashionable society, would have been a sovereign remedy.

Our author loves and magnifies his profession, for when alluding to the causes of early diseases in women, and to the province of the physician, he leads off in the following beautiful and appropriate strain: "Could we induce ourselves to believe the sole mission of the physician to be the administration of pills and potions, and to yield a servile obedience to the caprices of his employer, (a bondage that dishonors and degrades him,) our remarks would be impertinent. But we believe our profession to be that of a teacher of the laws of our being. Our college edifice is magnificent; aye, as extensive as the earth; our laboratory and cabinet, whatever it contains. Our pupils, mankind. Our text-book, the page of nature. It is true we sell no diplomas and minister with feebleness at her altar; we cannot always keep our spirit to the desired height amongst the daily toils of professional life; but to the best of our perception, we shall always speak the truth." Nor are his views less worthy consideration with reference to female education, he pictures truthfully, the maukish productions of the press, in the hands of the daughters throughout our land, as calculated only to excite feeling, and distract and direct their attention from the love of nature, and her impressive and useful teachings, to things worse than worthless, and well adapted to engender prejudice against (too common place) parents, whose every hour may be occupied with labors and considerations for their welfare. He says "there is a firm in New York who have done more to injure the morals of young girls by the publication of the over-strained and impure productions of the infamous school of modern French novelists than they could atone for, were their worthless and selfish bodies chained to a street sweeper's cart for a century." Our laws threaten punishment to the man who publishes obscene books and pictures. But of how much sorer punishment should they be thought worthy, who with fiendish ingenuity and intent adapt poems and novels to the insiduous poisoning of the minds and morals of the children of the present generation. But enough,

we are making the present notice longer than probably can be desirable to our readers. Before closing it, however, it is perhaps better that we should say, there are some things here, and for which Dr. Richmond is mainly responsible, which we think, not in the strictest accordance with propriety and good taste, for example, his old horse had a *glorious* way of limping—Erie was a "*glorious* body of water." Then he has "glorious eagle"—"glorious forest home," etc., etc., all this, and more like expressions may only be indicative of a free and easy manner—but, however agreeable such manner be occasionally, too much of it is ever objectionable. W. P. J.

Pronouncing Medical Lexicon, containing the correct Pronunciation and Definition of most of the words used by Speakers and Writers on Medicine and the Collateral Sciences, with Addenda. By C. H. CLEAVELAND, M.D., Prof. Mat. Med. and Therap., in E. M. Institute: Cincinnati. 1855. (From the Author.)

As much as we admire the handiness of this little volume, and its utility to the student for *definitions* of Medical terms, we could not refrain from mentally asking the question, was it to set forth the *Phonetic* language, or to furnish the Profession with a convenient compendium that this little volume was brought forth. It was truly an original idea, and one calculated to introduce the new phonetic alphabet to the attention of one of the professions. We would not be surprised to see similar works introduced into the Legal and Theological ranks. We are not sufficiently versed in the Phonetic alphabet to decide upon its judiciousness, but from a casual glance at its characters, the multiplicity of them, and the difficulty attending their formation, we are rather inclined to believe that a long time will have to elapse before it will be universally substituted for the good old Anglo-Saxon. This will have to become obsolete, like the good old Latin and Greek, should these new characters be adopted. The advocates of this new alphabet have not been wanting in zeal for their cause.

But the Lexicon of Dr. Cleaveland, for "the clearness, definiteness and accuracy" of its definitions, is valuable and convenient for the profession. R. O. C.

Principles of Human Physiology. with their chief applications to Psychology, Pathology, Therapeutics, Hygiene and Forensic Medicine. By Wm. B. Carpenter, M.D., &c. A new American from the last London Edition. Edited by Francis G. Smith, M.D. Philadelphia: Blanchard and Lea. 1855.

Carpenter is too well known to need any words of commendation from us. It is the standard work on Physiology, and of course finds a place on the table of every student of Medicine.

The present edition is, however, almost a new work. (From the Publishers, through W. T. Berry & Co., Nashville, Tenn.)

Sixth Biennial Report of the Trustees of the Tennessee School for the Deaf and Dumb, at Knoxville, to the General Assembly of Tennessee, Oct. 1, 1855.

This Report represents this noble charity of the State as being in a very flattering condition. There are at present seventy pupils participating in its benefits. But it is believed that there are at least 250 deaf mutes in the State who should be receiving instruction in the Institution.

Of the various causes of deafness in these 70 pupils, there were:—

Congenital,	27
Measles,	2
A fall,	2
Scarlet Fever,	3
Sickness,	2
Whooping Cough,	2
Fever in Head,	1
Fever and Typhoid Fever,	3
Ear-ache and Bealing in ears.	4
Cold and Vaccination,	1
Cutting Teeth,	1
Bealing in Head,	1
Unknown,	21
Total,	70

It is a cause of regret that so great reluctance is manifested by the relatives of the Deaf mutes to place their children in this

school, as only one-fourth of those in the State are enjoying its benefits. Every comfort is provided for them here that can be. Kind, attentive and competent teachers to instruct them. A gentle and humane matron, to watch over and nurse them; an accommodating and parental steward, to provide for their bodily comforts, and a skillful and attentive Physician to attend to them while sick.

Surely all of these kindnesses and attentions should be appreciated by all those who have the charge of such children and wards, as to induce them to place them in the Institution erected and sustained by the State for their benefit. R. O. C.

EDITORIAL NOTICES.

☞ A scarcity of printing paper prevented the issuing of the January No. at the proper time.

EAST TENNESSEE MEDICAL SOCIETY.

The Spring Session of this Society will be held in this city on the second Wednesday of April next, being the 9th day of the month.

Dr. Samuel Pride was elected to deliver the semi-annual address.

EAST TENNESSEE AS A RESORT FOR INVALIDS.

We have, by the kindness of the Editor of the Knoxville Register, a letter before us from "An Invalid" at Charleston, asking information as to the climate of East Tennessee, "whether it is favorable for persons afflicted with pulmonary diseases, whether the changes in the weather are sudden and frequent, and whether the spring is regular in temperature, and whether the seasons, the year round, are regular and even in temperature?" In the Register of the 22nd inst., Dr. Moorman thus replies to the interrogations:

MR. FLEMING:

Dear Sir:—It gives me pleasure to respond to your inquiries, as to the positive and relative adaptation of the climate of this portion of East Tennessee, to persons predisposed, or laboring under Breast Complaints.

I have no hesitation in expressing the opinion—the result of considerable observation—that the climatical influences of this particular region upon the constitution of persons predisposed to, or actually laboring under pulmonary diseases, are very favorable; and such I think must have been the general observation of the intelligent mind that has been directed to the subject. Severe or mortal cases of Consumption, or Bronchitis, are of less frequent occurrence in this, than in most other regions of the

United States, and especially in the more Eastern, Northern, and Western divisions of the country.

Among the cases that do exist, there is evidently less fatality than in most other countries, and although the disease, when of hereditary character, may not be eradicated from the system, (for perhaps, it never is in any climate,) it is modified in its influences, and retarded in its fatal termination.

In my own practice, in this country, I have often been highly gratified with a marked suspension of the fatal march of such diseases, in cases in which I am sure a fatal termination would speedily have been the result in less genial climates.

I am disposed to attribute these favorable influences in pulmonary disease, to the softness and mildness of the climate, and especially to the fact, that the vicissitudes or changes of weather from hot to cold, and from cold to hot, are less sudden and severe here than in most other localities in America; and to the important fact, that we have less violent and piercing wind in this region, than in any other that I have known. Although not exempt from occasional blustry weather, there is far less of high and chilling winds at every period of the year, than is witnessed in most sections of the Union, and especially in the more Eastern, Northern and Western portions of it.

Whatever be the modifying influences upon such diseases, I may safely assert, that there are few regions in America, and I would accept none but some peculiar positions near the southern seaboard, where the invalid with existing or threatening lung affections is more safe, so far as climate is concerned, than in this region of East Tennessee.

Very respectfully,

JOHN J. MOORMAN.

KNOXVILLE, Jan. 20th, 1856.

We will only add that during the last very severe cold season, the temperature was more elevated here than at other points on same latitude. At Nashville the thermometer was as low as 10 degrees below zero. At points in Virginia it ranged from 5 to 15 below zero—while at Knoxville it reached zero only once. We have never known it to go higher than 96 degrees during the summer, and our observations, from a series of years, is that there is uniformly a difference of 10 degrees between the temperature of this point and that of any point to the east or west. The average temperature for the year is about 60 degrees.

This uniformity of temperature conduces greatly to an exemption from pulmonary diseases.

Of Pulmonary Consumption, we have known but few cases in our midst, and none that could be said to have had their origin here.

Of Pneumonias and Pleurisies, we find that they yield readily to treatment, although presenting traits of as great severity, as to be found elsewhere.

This comparative freedom from the diseases of one class, and mildness of those of the second, arises from several considerations, besides the mildness of the climate. The geological character of this district contributes in some degree to this exemption. Our strata, of a magnesian limestone generally, is upturned, dipping at an angle of 45 degrees. Thus there is presented no flat rocky strata to be the constant sources of a damp, chilly evaporation during the winter, nor for reflecting the rays of the sun during the summer. The soil being of a clayey nature, readily allows the surface water to drain off into creeks and branches, without being absorbed and therefore rising under the summer's sun to produce damp, chilly fogs. Various opinions have been entertained as to the character of the locality best suited to those laboring under this class of diseases. Some contend for an elevated position, with a dry, elastic atmosphere, while others are in favor of low, damp localities. For our own part, we regard a medium as that most conducive to health under *all* circumstances, and such is afforded here in the valley of East Tennessee. We say *valley*, for an inspection of the map will show a valley of not quite one hundred miles in width, and near two hundred in length, closed in on the North, East and West, and partially on the South, by parallel ranges of mountains. Thus we are cut off, and protected from the piercing north-west winds and storms, as well as from the hot southern breezes. In addition to these natural barriers on every side of this valley, there are also parallel ranges of mountains of less altitude running through the valley in same direction with the higher range; and it is a singular fact in the geology of East Tennessee that its strata, its streams, and its mountains all pursue parallel courses, ranging N. E. and S. W.

Many of those points to which invalids resort in quest of health, are salutary during only a part of the year. But our climate of East Tennessee is salubrious at all seasons. Thus in addition to its natural advantages, arising from its mineral resources and its facilities for manufacturing operations, and from its fertility of soil, great incentives are offered to all, under all conditions and circumstances, to seek a home where they can be free from dread of the noxious miasm and pestilential disease. Where they may breathe a pure, fresh atmosphere, neither so chilled nor so parched, as to derange the vital functions, and where the mineral veins, or the fertile soil, or the water courses, or the stock lands yield as handsome profit to labor and capital invested in them. R. O. C.

☞ We direct the attention of our readers to the letter from the Medical Society of Paris, and in that connection, would also ask a perusal of the Editorial from the New York Journal of Medicine, with reference to the reduction of dislocations of the femur by the process of manipulation, as first practised by Dr. Reid, of this country.

Dislocation of Femur Reduced by Manipulation in London Hospitals.—The London Medical periodicals have recently contained reports of cases of reduction of dislocation of the femur, by manipulation. The first cases, two in number, occurred in Guy's Hospital, (*Lancet*, July 7,) under the care of Mr. Cock; one was of five weeks standing, the other more recent; both had been subjected to the pullies. The reduction was easily effected in both cases by manipulation. The reporter adds, "from a careful study of the skeleton, Mr. Cock finds the secret to be to handle the femur as if it were the humerus; then flexing it on the pelvis, abduct strongly, thus lifting the head of the bone with the accessory band of the ilio-femoral ligament, over the acetabulum, while you also rotate the lower condyle or limb in your hand outwards."

In the *Lancet* for Aug. 4, we find another report from Guy's Hospital, of seven cases under the care of Mr. Birkett, four of which were reduced by manual extension, and three by flexing the thigh upon the pelvis, abducting and rotating it. Of the three latter, two were in the foramen ovale and one in the ischiatic notch. The writer makes the following introductory re-

marks:—Dr. Reid, of New York, also gives an American plan of reduction in cases of dislocation of the head of the thigh-bone; and Dr. Markoe, one of the attending surgeons of the chief N. Y. Hospital, has recently furnished nine cases of his own, and three others treated by New York surgeons, twelve cases in all; of which three were dislocations into the foramen ovale, eight, (five of his own and three of others,(on the dorsum ilii, and one into the ischiatic notch. We do not hear of the luxation on the horizontal branch of the os pubis, or the still more rare accident behind the tuberosity of the ischium. The method of the American surgeons is much more violent, and not more effective, than that adopted at Guy's, and at some other London hospitals, the displacement being remedied, according to the former, "by flexing the leg on the thigh, carrying the thigh over the sound one, upwards over the pelvis, as high as the umbilicus, and then abducting and rotating it." A peculiar "rocking motion" is much dwelt on, however, by our transatlantic brethren, as necessary to induce the head of the bone to regain or creep back to its normal position—a plan spoken of by Colombat—an old modification of the present methods by manipulation, also now highly prized by some surgeons; but we doubt if, under chloroform, the patient could be so well adapted to it as in the plan of Mr. Cock, and Mr. Birkett at Guys, which seems to answer all purposes."

If the writer of this report will carefully examine the valuable paper of Dr. Reid, in the July, 1855, number of the *New York Journal of Medicine*, he will learn that the "American plan," or the method of Dr. Reid, is *entirely destitute* of violence. Dr. R. even deprecates the employment of chloroform, as "the pain produced by manipulation is too trifling to require an anæsthetic of any kind." His third proposition if followed, effectually prevents all violence:—"The general rule for reducing dislocations should be, that the limb or bone, should be carried, flexed, or drawn, in that direction which will relax the extended muscles."

Dr. Markoe's experience confirms this view; he says "we never have accomplished anything by proceeding in a direction where great force was required to continue the movement, but have always succeeded by finding a direction in which the more continuance of the movement without force, has brought the head into the proper position."

In the "American plan" again, the "rocking motion" has no existence. Dr. Reid speaks of "making gentle oscillations of the thigh," and condemns the rocking motion mentioned by Dr. Markoe.

In the present number of this journal, we supply the deficiency in the history of this operation alluded to by our London contemporaries. The two cases of dislocation upon the pubes, reported in our original department, by Dr. E. J. Fountain, of Iowa, are extremely interesting, and their successful treatment by manipulation alone, reflects great credit upon this ingenious and accomplished surgeon. The warmth of Dr. Fountain's praise of this great improvement in practical surgery, and his acknowledgment of Dr. Reid's merit are appropriate. We can well imagine the degree of estimation which the isolated practitioner must place upon a method of treatment of one of the most formidable accidents in surgery, which allows him to dispense with the pullies, cords, bandages, anæsthetics, a half-score of assistants and enables him, with facile hand to accomplish in twenty seconds, without pain, what before, with all these trappings, required hours, and even then often failed.

We deem it our duty to make this allusion to the negligence of foreign writers to accord to American surgery its proper due. It matters nothing how many times luxations of the femur have been accidentally or deliberately replaced by manipulation; to Dr. Reid belongs the unqualified merit of *first* establishing, by actual demonstration of its principle, the proper method of procedure. However much Mr. Cock, of Guy's Hospital, may have studied the skeleton for "the secret," he has not discovered a plan of reducing dislocations of the femur superior to the American. The first intimation of this method of operating, though not acknowledged, we doubt not was derived by the London surgeons, from the paper of Dr. Markoe, in the *New York Journal of Medicine*, for January, 1855, which was soon after republished in England.—*New York Journal of Medicine.*

☞ The following letter was received at same time with the printed pamphlet of the Constitution and Laws of the American Medical Society of Paris. Intending to comply with the request of the Society, we ask of our Medical friends reports of surgical and medical cases treated by them, especially where they have exhibited any peculiar and important traits:

HALL OF "THE AMERICAN SOCIETY IN PARIS,"
Rue des Quatre Vents No. 6, Paris July 4, 1855.

Sir:—In obedience to a resolution of "The American Medical Society in Paris," the undersigned in addressing you a copy

of its lately published Constitution and Catalogue have been instructed at the same time to direct your attention to certain facts in regard to the society, which it is hoped may prove of interest to you and the profession generally in the United States.

This Society occupies an exceptional position, and one which might enable it to be the medium of doing great service to the profession in the United States, by means of an international exchange of professional labors.

The American physician still encounters in the wards of the Parisian Hospitals the sneering question—"What have you ever done in America to advance the science of Medicine?"

The almost complete forgetfulness with which the profession of the United States is passed over on the one hand, and the ridicule with which it is treated on the other, have taught such of us as know most of the opinions and the tone of the medical men of this country, that a remedy for this state of things is demanded, and that some means ought to be adopted to put the remedy into execution.

There are honorable exceptions to these appreciations of the labors of the profession in the United States, but they do not extend to any considerable portion of the profession of this country; and when we hear so distinguished a man as the learned Professor of Surgery of the Faculty of Medicine of Paris, declare in his official lecture at the School of Medicine, while ridiculing American pretensions to originality in surgery, "that because the Americans had discovered Anœsthesia, they had become so puffed up, as not to be able longer to realize their true position in the world of surgery." We think that some efforts ought to be made by the profession in the Uuites States to correct this erroneous estimate of their labors, and to show to the profession of France that their brethren of the United States have rendered valuable services even to French Surgery.

"The American Medical Society in Paris" has, by the facts which it has furnished from time to time to French Medical authors, contributed in a measure to dissipate these mal-appreciations, and has thus succeeded in introducing into French ranks, flattering notices of the success of American Surgery—success

of which the eminent French authors had no previous knowledge, and which would never have found a place in their ranks but for the existence of the American Library at Paris. The committee, therefore, appeals to the profession in the United States, to authors and publishers especially, to send contributions to the Library of "The Medical Society in Paris."

The society places its claims for the sympathy of the profession at large upon national grounds—for from its geographical position, and frequent changes of members, it is supported more by patriotic than by personal motives, and it is upon these grounds that this appeal is made.

Through the politeness of Mr. Bossange, Bookseller, No. 138 Pearl street, New York, to whom all books should be addressed, and the obliging Forwarding House of Messrs. Livingston, Wells & Co., No. 8 Place de la Bourse, Paris, all contributions addressed to the Society will arrive safely.

W. E. Johnston, M.D., Pres.,
David P. Holton, M.D., Libr.,
Sam'l. Gourdin, M.D., Cor. Sec.
} *Committee.*

RECORD OF MEDICAL SCIENCES.

AMPUTATION AT THE KNEE JOINT.

BY THOMAS M. MARKOE, M.D., ATTENDING SURGEON.

In this paper, published in the New York Journal of Medicine, January, 1856, Dr. Markoe takes the position, and advocates it, that in many cases, requiring amputation, it was preferable to remove the member at the knee joint than through the thigh. He names two cases in his own practice; and refers to nine which had occurred in the New York Hospital.

In April. 1824, Dr. Nathan Smith of New Haven performed the first operation in this country of exarticulation of the leg at the knee joint. The operation was successful, the patient recovering rapidly.

We make a tabular statement of the cases reported and the results:

DATE.	SUBJECT.	SURGEON.	RESULT.
1824.	Girl . .	Dr. N. Smith . .	Recovered.
1833.	Man . .	Dr. Blaquire . .	"
1841.	Woman .	Prof. Pancoast . .	"
1846.	" .	Dr. J. K. Rodgers	Died.
1848.	Man . .	"	"
1851.	" .	———	"
1852.	" . .	Dr. Buck . . .	Recovered.
"	" .	"	"
"	" . .	Dr. W. Parker . .	"
1853.	" .	Dr. Watson . .	Died.
1854.	" . .	Dr. Moses . . .	Recovered.
1855.	" .	Dr. Halsted . .	Died.
"	Girl . .	Dr. Markoe . . .	Recovered.
"	Man .	"	"
———	——— . .	———	"
———	——— .	Dr. Sabine . . .	"
———	——— . .	Dr. Castley . .	"

In all seventeen cases, of whom 12 recovered, 5 died, mostly from the severity of the accident which demanded the operation.

Dr. Markoe offers some considerations for this operation as a substitute for that through the continuity of the femur.

1. The crowning advantage is that the stump left is more useful, and will bear readily the pressure of the body, with only a simple cushion between it and the artificial limb.

2. As no parts are cut but the integuments, there is less shock to the system, and consequently the amputation is less extensive than higher up.

3. There is comparatively little muscular tissue divided, and hence little risk of suppurative inflammation. The incision is mostly made through tendons, which immediately retract in their sheaths.

4. The popliteal, the two crural, and the two inferior articular arteries all pass through the centre of the popliteal space, all of which can be readily tied, and the ends of the ligatures passed readily through a small opening in the posterior flap.

5. Again by this operation no injury is done to a large bone as in the thigh operation.

Of the modes in which this operation is performed, Dr. Markoe gives the preference to that which consists in making an anterior and a posterior flap out of the integuments. They should be long, so as to obviate any tension when drawn together over the condyles of the femur, and held together by close sutures. A scalpel is sufficient to make the anterior flap, and to cut through the sheath of the joint, and a catlin knife for the posterior flap. The ligatures of the arteries are passed through an opening made in the posterior flap, and the edges of the two flaps are brought together and held by stitches closely made.

Dr. Markoe says:

"In recapitulation of the points advanced in this paper, it would appear:—

1.—That the amputation at the knee joint has been regarded with disfavor, and rejected by the mass of the profession.

2.—The results of experience seem to warrant and demand a re-consideration of this unfavorable verdict.

3.—It is found, that the stump left after this operation, is much more useful than that left after amputation of the thigh, it being capable of bearing well, and easily, the weight of the body on an artificial limb—a consideration involving great comfort to the rich man, who wears an artificial limb; and on the poor man, who must otherwise walk with a crutch, conferring the power of

walking on an ordinary peg leg, thereby enabling him to earn his livelihood.

4.—This amputation is, probably, attended with less constitutional shock, inasmuch as it is performed farther from the trunk than amputation through the thigh.

5.—The wound made in section of knee joint is really less extensive than in amputation higher up.

6.—No muscular interspaces are exposed by the knife, and, therefore, there is less danger of inflammation spreading up the thigh.

7.—Fewer ligatures, and those more favorably situated, are used in this operation.

8.—The muscles moving the stump are not severed, and the patient is able, therefore, to move the stump, with extraordinary facility, and is but little liable to painful muscular twitchings.

9.—No retraction of muscles can exist, by which the coverings are drawn back from the end of the bone, producing conical stump.

10.—The bone is unwounded in this amputation, and thus the numerous and serious dangers, which arise from sawing the bone, and exposing its medullary cavity to air and pus, cannot exist.

11.—The dangers apprehended from opening so large an articulation, have been very greatly exaggerated, and are, in practice, found to be of rare occurrence.

12.—Statistics show that the mortality, after this operation, compares favorably with amputation of the thigh, being 37 per cent. of deaths in the former, against 43½ per cent. in the latter.

13.—The best mode of operation, when we have a choice, is by the long anterior, and short posterior flap.

14.—The verdict of some of the first French and English surgeons, is decidedly in favor of the knee-joint operation."

WHITE SWELLING AND HIP DISEASES.

In the Med. Chir. Review for July, 1855, there appears a very valuable paper on the memoirs of the French Academy of Medicine. One of the papers contained in these memoirs is on *White Swelling*, by M. Richet—who believes that the disease "may be included under two fundamental varieties, viz: Chronic inflammation of the Synovial membrane, and of the articular extremities of the bones."

The Reviewer says "When we examine a joint that has suf-

fered from white swelling, originating in osteitis or advanced synovitis, we almost always find the appearance as if the cartilage had been irregularly punched out. Around these spots it is quite normal, not having even lost its cohesion and elasticity, unless effusion or other alteration of the cavity of the joint be present. Generally there is more or less synovitis present; but when this is not the case, a superficial examination might lead to the affection being considered a primary lesion of the cartilage. But if the bone be so cleft that the saw fall in the centre of the erosions, osteitis will be found occupying the articular extremity of the bone, and most intense where the loss of the cartilage is seen. Brodie and other surgeons have contended that such loss of substance is due to a primary affection of the cartilage, which, extending to surrounding parts, gives rise to one of the most painful varieties of white swelling. The facts cited by Brodie are valueless, in consequence of the very superficial manner in which the examination of the joints was conducted. The history of the condition of the joints in the aged, in which, when the cartilage is gone, eburnation takes place, a change inducing little or no pain, is contradictory to the accuracy of Brodie's assignation of severe pain as a sign of cartilaginous disease. Osteitis induces the most dreadful suffering."

Symptoms.—M. Richet observes that, "in the case of such superficial bones as the tibia and ulna, we may often detect early a little puffiness of the periosteum rounding off the edges of these bones that are naturally so sharp and distinct."

In coxalgia there is a constant reference of the pain to the knee and many have supposed that the seat of the disease was there, and treated the invalid for neuralgia and rheumatism. But M. Richet explains this symptom by stating as the result of his observation that *the inflammatory action is propagated along* the medullary canal from one extremity of the bone to the other, and such pains are very important as enabling us to diagnose between an *osteitis* and a *synovitis*, as it accompanies the former disease.

The Diagnosis of this disease we quote from the Reviewer, only premising that *synovitis* implies inflammation of the synovial membrane—which lines the cavity of the joint, and *osteitis*

is inflammation of the substance of the bone itself, but the one may supervene upon the other, and the reverse.

"In this section (Diagnosis) M. Richet chiefly occupies himself in pointing out the distinguishing marks between osteitis and chronic synovitis. The latter may be due to a local cause, although its progress is usually denominated by a general one; but osteitis is almost always referable to a general cause. Synovitis often succeeds rheumatism. Osteitis is usually of scrofulous origin. In synovitis, the various symptoms may appear almost simultaneously; but in osteitis they are more gradual and progressive. In synovitis, there is hypertrophy of the synovial without swelling of the bone, and the softened ligaments allow of considerable and abnormal movements, while consecutive displacements occur frequently and rapidly, without deformity of the articular surfaces. In osteitis, there is appreciable enlargement of the bone, the limited motions are terribly painful, and the displacements, which take place slowly, are due to the flattening down of the deformed articulations."

In the Treatment of this disease, M. Richet speaks highly of Iodine and Cod Liver Oil. Hydropathy he believes possesses certain tonic effects which render it valuable. Sea air and mineral waters are valuable, while he does not place much confidence in vegetable tonics, nor in iron. Of the local applications in *synovitis*, he prefers the prolonged use of local baths, and the nitrate of silver ointment, which seems to have a good effect in relieving violent and obstinate pains.

In *Pseudo-membranous Synovitis*, in which a false membrane unites the synovial membrane with the fibrous tissues of the joint, issues and the actual cautery are recommended:

"Premising that there are several varieties of inflammation of the hip joint, we proceed to investigate the morbid changes, so well known as occurring in young subjects, and termed strumous. We notice very early softening of the ligamentum teres: Fricke dissected the diseased hip joint of a child, aged 4, in whom he found the ligament thinned, and its synovial investment softened and swelled; further observations show that this process goes on until the fibrous structure is broken up, and only a few shreds remain—usually attached to the head of the femur—but these ultimately disappear by constant friction. These changes are accompanied generally by synovitis, shown by the red and swelled condition of the synovial fringes, and of the gland of Havers, the latter becoming also remarkably hypertrophied."

The IXth Review of the same number consists of a notice of a recent work of Dr. Crocq on White Swelling, from which we extract largely, concerning the treatment of these painful and too frequent diseases.

"To found a system of treatment, in cases of strumous "hip-disease," upon the idea that the morbid process was simply synovitis, would lead to error; for it is well known that the reduction of the strength, by the abstraction of blood, and other antiphlogistic measures, combined with the imposition of a system of perfect rest, will in time produce such changes in the skeleton as may in themselves lead to the destruction or injury of the joints."

We will now proceed to review the principles of treatment laid down by Dr. Crocq for the different stages of this disease, which, we cannot help thinking, corresponds with his *tumeur blanche*, although he denies the scrofulous origin of the latter. White swellings, he observes, are cases of exudative arthritis, with a tendency to the production of pus and of cellulo-vascular tissue. There are four distinct elements or stages: 1. that of abnormal afflux of blood; 2. of plastic exudation; 3. of organization of the cellulo-vascular tissue; 4. of the production of pus.

"At the commencement, the two first elements exist alone, namely, the afflux of blood and the exudation. The indication is to prevent the continuation of these phenomena. The first condition required is the complete immobility of the articulation; by this we annihilate one of the causes which tend to make it a centre of fluxion. But there is another measure which may be combined with the preceding; namely, compression, by which the surrounding soft parts are supported, and the vessels are compressed. We believe that these two points, immobility and compression, merit in their more complete and scientific application greater general attention than they receive in this country. At a later stage, when the exudation has become organized as cellulo-vascular tissue, the indications consist in repressing the afflux of blood, and preventing further exudations; and in favoring the transformation of the cellulo-vascular into cellulo-fibrous tissue. The first condition has been already met by immobility and compression. As to the second, the result to be obtained is cicatrization, for it consists in the passage of the fungous growth into fibrous tissue. The author meets these difficulties by the same means, namely, a system of immobility and compression."

"Four important elements yet remain to be considered—pain, position, displacements or luxations, spasmodic contraction of the

muscles. Compression quiets the action of the muscles. The apparatus for rendering the limb motionless must, by extension, prevent displacements; these means alone will assuage pain. The principles have long been recognized. Brodie and Desault recommended immobility; Malgaigne and Bonnet both apply it with success. Compression was employed in olden times by A. Paré, and in our days by Scoft and Velpeau. The combination of the two has been especially insisted upon by MM. Seutin, Lavacherie, A Fredericq, Burggraeve, &c.

"The following have been recommended in the treatment of these affections:—Local bleeding, narcotics, astringents and the application of cold, resolutives, revulsives. Local bleedings have been strongly recommended by Latta and Lisfranc. But what is their mode of action? By the abstraction of blood? evidently not. It is by directing the current of blood to another part, and by acting as a derivative. Thus, local bleedings, to be useful, should be often repeated; otherwise they become hurtful. They should be employed only on the robust. Dr. Crocq does not attach much value to cataplasms and warm fomentations. He believes them to be injurious by favoring the afflux of blood. In this we do not agree. They may be incapable of effecting any important change for the better, but they possess no power of doing harm. He advocates a plan which we can strongly recommend for the relief of pain, which often destroys rest and impairs digestion, namely, the local application of narcotics. Medicated poultices, containing laudanum, &c., are not sufficiently active, but a pomade of chloroform, commencing at half an ounce to the ounce of lard, has acted beneficially, especially to nervous subjects. As the effects of chloroform are transient, 5 to 10 grains of the acetate of morphia or of the cyanide of potassium may be added to the same dose. Dr. Crocq prefers the following pomade:—Ext. belladon. alcohol., ʒij.—ʒj; axung. recent., ʒj; ol. olivæ, ʒss. Should this fail, half a grain to a grain of acetate of morphine may be added.

"Revulsive remedies, which act on the skin, and, as Broussais observed, call the irritation from one point to another, are divided into four classes. 1. Rubefacients; 2. blisters; 3. caustics; 4. seton. Of the two first no particular notice is required, excepting that Crocq warns the surgeon against the practice recommended by Velpeau, of enveloping the whole joint in a blister.

"Mr. Horner has lately recommended the continued application of potters' clay, ℥; guano, ℥. The skin soon reddens; in a few days phlyctenulæ appear, then a real vesication. These effects are due to the urate of ammonia found in the guano.

"The most effectual remedy of this class, however, is undoubtedly cauterization, which Crocq arranges, under six heads. 1. Inherent cautery; 2. transcurrent cautery; 3. moxa; 4. caustic potash; 5. Vienna paste; 6. chloride of zinc.

"The inherent cautery is effected by a metalic instrument, of various forms, heated to a white heat, and allowed to remain a sufficiently long time to act deeply. If it be the prismatic cautery of Rust, the instrument, firmly pressed against the skin, must be made to pass slowly over an extent of two to four inches. The joint should be thickly covered with soft parts.

"The transcurrent cauterization is effected by a knife or spear-shaped instrument. It should be heated to a white heat, and made to pass over the skin without resting, so as to produce a simple seam or streak. These streaks should be rather less than an inch from one and another, and in the long axis of the limb. The heated iron may be made to pass several times over the same line, so as to give it a deep yellow hue. It is applicable to joints placed immediately under the skin, such as the knee, the elbow; while the preceding is preferable for thickly covered joints, such as the shoulder, the hip, the spine. The pain may be mitigated, or indeed altogether removed, by the employment, for half an hour to an hour of pomade of chloroform, or, for a shorter period, of pounded ice; but it is better that the patient should, when possible, suffer pain.

"The rules for the employment of revulsives are, then, as follows. They must be applied at a proper distance from the diseased synovial membrane. The more acute the inflammation, the further off they must be made to act. Slight cauteries must be applied to joints superficially seated. There is no need to promote suppuration. The cauterized lines need not be above one-half or three quarters of an inch wide. A first application should be followed by others. Violent revulsives should be avoided in infants, and in nervous and irritable subjects. In such cases rubefacients of nitrate of silver ointment, and such like remedies, are best borne. Of the moxa and seton no special remarks are needed. With these remedies, compression and immobility should always be combined. The cases requiring specially the addition of revulsives are chronic articular diseases, and those of the hip accompanied by muscular spasm.

"In the selection of an apparatus, it should be borne in mind that the position of the bones which will subsequently give to the patient the most useful limb, is not always that one most conducive to the arrest of the disease. Let us take for an example the articulations of the inferior extremity. The ligaments, while

they remain, are so formed, that in the extended state of the limb, the bones are firmly pressed against one another; and the patient would therefore suffer greatly, were their articular extremities inflamed, and the cartilaginous coverings loosened. The directions given by Dr. Crocq are better suited for joints where anchylosis is going on, or where the destruction of the surrounding parts has been considerable. He recommends that the articular surface should touch one another in as many points as possible, and the cavity offer as little capacity as possible. He prefers the amovo-inamovible apparatus of M. Seutin, which is applied as follows: all osseous and tendinous elevations are protected by wadding, and the whole limb is surrounded by a roller, commencing at the affected part, or at the extremity. This bandage is covered by starch upon its surface, care being taken to avoid spreading it over the elevation, where it would press unpleasantly when it became hard. Two or three layers are thus applied. Then pasteboard splints are formed for the limbs; they are softened in water, coated on both sides by starch, supplied by wadding pads, and torn, rather than cut, into shape. A starched roller holds them in place.

"Dr. Crocq has related some cases, and we have seen others, in which the effects of a well-applied apparatus have been remarkable in relieving pain, controlling muscular spasm, and diminishing the general swelling."

Although we have quoted thus largely from the Reviewer, yet we do not think that we could have filled the pages with more important matter. And in concluding these notices of this disease, we are of the opinion that too much importance cannot be attached to the immobility of the joint. Without this, all other treatment is useless, and with this alone, when the disease has not already gone too far, a perfect cure can be in nearly every case effected. But by *immobility* we mean a perfect rest, for unless done perfectly it were better it had not been done. Our author recommends the *starch* bandage for these diseases. We prefer either the felt splint or a wooden splint. The former is prepared by taking a piece of beaver cloth and coating one side with three successive layers of an alcoholic solution of Gum Shellac, then fold it together, and press firmly with a hot iron. While warm it is quite pliant, and may be moulded into any shape, but as soon as it is coated it becomes as firm and as hard as a board.

R. O. C.

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ORIGINAL COMMUNICATIONS.

ART. XVI.—EVANS' PRACTICE.

TWELVE MONTHS' PRACTICE IN THE CHEROKEE NATION WEST.

BY J. P. EVANS, M.D., LATE OF TAZEWELL, TENN.

[Continued from page 97, Vol. 4.]

CASE 148.—*Remittent Fever.*—Aug. 30th. John R. Gourd, aged about thirty years, had suffered with an attack of fever, some three days previous, (ushered in, as usual, with chill, pain in the lumbar region, &c.,) which had continued with slight morning remissions. Arrived (six miles) during the forenoon, and found him with febrile excitement quite palpable, but not of that intense character which distinguishes the status of the hot stage of periodic fever; dry skin, head-ache, and thirst. During the periods of increase, he has suffered with nausea and vomiting. He had taken a cathartic of patent pills.

℞. Acet. of morphine, ¼ gr., to be taken on the first appearance of the increase of fever. Sweet spts. nit., a tea-spoonful every two hours during the afternoon and night. S. quinine, 25 grs., in six portions; one to be taken every two hours, commencing at 9 o'clock to-night.

Sept. 1*st.*—Called, and found my patient better—there was an intermission. Learned that a paroxysm of fever had taken place the day before, and that he had perspired freely during the most of the time he was taking the quinine; and, that there ap-

peared to be an intermission; but at 11 or 12 o'clock, there was an access of fever.

℞. S. quinine, 20 grs., in six portions, to be taken as previously, commencing at 11 o'clock at night.

At 12 o'clock, M., fever again appeared. The medicine was taken as directed, and there was no return of the disease. No relapse.

Perhaps, in the first attempt, too great a period of time intervened between the last portion of the quinine taken, and the regular paroxysmal hour, and accounts for the failure.

I will here remark that in a majority of cases of remittent fever, which have been observed by me for several years past, the chill is not repeated, at least in a degree appreciable by the patients.

Case 149,—*Intermittent Fever.*—Aug. 31st. A young Indian man, suffering with an intermittent, called at my office two or three hours before the usual period of chill, and took S. quinine, 10 grs., at once. Jugulated.

Case 150.—*Obscure Intermittent.*—August 31st. Visited a negro woman belonging to David Rowe, aged about 25 years; arrived early in the night, distance 21 miles. She had been sick for two weeks or more, and could give but an imperfect account of her case. Menstruation (a week before my visit) had been painful; and throughout the abdomen, but more particularly in the hypogastric region, a painful condition had been present, from the first. She always felt better during forenoons. This, (with a general feeling of *malaise*. and loss of appetite,) constituted the sum of the information given. Found her somewhat emaciated; very slight tenderness on pressure over the abdomen; pulse small, and somewhat frequent and irritable; skin dry, and somewhat above the natural temperature. She had taken cathartic pills and castor oil, several times, and had been under the management of an old woman, who gave her various decoctions and infusions for *cold*, as she expressed it—meaning deranged menstruation.

℞. S. quinine, 26 grs., made into 16 pills. Two to be taken every two hours, (commencing immediately,) until all are taken.

Tinc. iodine, 5 drops, three times a day, gradually increased to ten.

I left the same night. Afterwards learned that the woman recovered rapidly.

Case 151.—*Intermittent Fever.*—Sept. 1st. Susan Deer-in-the-water, had plain tertian intermittent.

℞. S. quinine, 20 gr.-, in six portions, taken during the latter part of the intermission, jugulated it.

Three weeks afterwards she relapsed in a severe form—a quotidian, attended with diarrhœa, long paroxysms and short intermissions. Visited her (six miles) early in the night. There was yet some febrile excitement, but the hot stage was manifestly on the decline.

℞. S. quinine, 25 grs., in six portions. All to be taken by 9 o'clock the next day. Blue mass, 5 grs. S. morph., ¼ gr., to be taken immediately. Jugulated. No other relapse.

Case 152.—*Catarrh.*—Sept. 1st. A negro man at Anna Price's had a severe catarrhrl affection, so as to be disabled from working.

℞.—S. Morph., - - - 1 gr.,
Ipecac, - - - - 6 grs.

Mixed and divided into six portions. One every two hours. Benefit resulted, and the man returned to his work the next day.

Case 153.—*Diarrhœa.*—Sept. 1st. A negro boy, at the same place, aged eight years. No fever.

℞.—Dov. powder, - - - 3 grs.,
Acet of lead, - - 1 gr.

A few doses sufficed.

Case 154.—*Intermittent Fever.*—Sept. 2nd. A child of W. S. Steele, only a few months old, had tertian intermittent.

℞. S. quinine, 8 grs. in six portions, during the latter part of the intermission. Jugulated.

Case 155.—*Remittent Fever.*—Sept. 2nd. A son of John Meigs, dec'd., aged twelve years, had been taken with chill on the 31st ult., which was followed by febrile excitement; it had not wholly subsided up to the time of my visit. There were present the usual concomitants. No anomalous symptom. Had taken a cathartic on the first day.

℞. Dulc. spts. nit., half a tea-spoonful, every two hours, during the afternoon.

S. quinine, 15 grs., in six portions. All to be taken by 9 o'clock, A. M., the next day, commencing early in the night.

3rd.—Afternoon. A paroxysm had again occurred. There had been an intermission during the greater part of the forenoon.

℞. The same as above. Jugulated. No relapse.

Case 156.—Sept. 2nd, A young negro woman, belonging to the Principal Chief, some six or seven months gone in pregnancy, with her first child, had pains of a parturient character, which were allayed with opium, in 1½ to 2 gr. doses. Three or four doses sufficed. This patient will again appear in these notes.

Case 157.—*Intermittent Fever.*—Sept. 2nd. A little son of Richard Coody, had had chills and fever, (as all intermittents are called by the people of the west, which are not attended with *shaking*,) of a severe grade, for two days. Had taken castor oil.

℞. S. quinine, 10 grs., in six portions. Jugulated.

Case 158.—*Neuralgia of the Ear.*—Sept. 4th. Mr. Dutcher, aged about fifty years. Has had for a week or more a troublesome pain in the right ear. Some short time since, I examined the meatus auditorious externus, and removed from it a large quantity of inspissated wax, and directed the topical application of tinc. opium and olive oil. But the pain returned every day at a certain hour, and had now extended on the side of the face in the directions of the molar branches of the portio dura.

℞.—Blue mass, - - - 10 grs.,
S. quinine, - - 20 grs,

To be taken during the night. The blue-mass to be taken at bed-time.

5th.—Forenoon. Saw the patient in passing; he stated that the pain was considerably lessened.

℞. S. quinine, 8 grs., at once. The pain entirely disappeared in the course of the day, and did not return; the secretion of the ear in a short time became natural or nearly so.

Case 159.—*Leucorrhœa of Pregnancy.*—Sept. 4th. Mrs. J., a young married lady, about six months gone in pregnancy; for some two weeks she has had a profuse leucorrhœal discharge.

℞. Tannic acid, a strong solution to be injected two or three times a day. The discharge disappeared in a few days.

CASE 160.—*Remittent Fever.*—Sept. 4th. Visited a grandson of Mrs. Gilbreath, recently from Alabama. There had been continuous febrile excitement of a high grade for three days, with slight and short remissions—an exacerbation taking place early in the day; had taken a cathartic, and some domestic remedies without any mitigation.

℞. S. quinine, 26 grs., divided into nine doses; one to be taken every two hours. Blue mass, 5 grs.

Commenced giving the quinine early in the night. The dermoid surface, from being hot and dry, soon became soft and moist; and early in the morning thore was a subsidence of all febrile phenomena. Left early in the day, with instructions to continue the quinine, whether a paroxysm occurred or not. Learned from Mrs. Gilbreath, a few days afterwards, that considerable fever arose in an hour or two after I left; that the medicine was continued until all was taken; that the paroxysm was of short duration, and had not been repeated. Some weeks afterwards, he relapsed in the form of ague, which was jugulated with 20 grs. S. quinine; and shortly afterwards he set out for Alabama.

CASE 161.—*Intermittent Fever.*—Sept. 31st. A Nave, aged 25 years, had quotidian intermittent.

℞. Sulphate of quinine, 20 grs., in six portions, taken during the intermission, jugulated it, and no relapse occurred.

CASE 162.—*Infantile Remittent.*—Sept 5th. Visited a little son of W. G. Barker, aged about two years. Fever had been apparent for several days. Found him with a hot, dry skin, and very costive, the bowels not having acted since the febrile invasions, except once, slightly, when the fæces were very compact.

℞. Calomel, 10 grs., divided into two portions, to be given fours apart. It was now in the forenoon. S. quinine, 12 grs., in six portions; to be taken principally during the night, and the remainder early in the afternoon.

The calomel acted during the afternoon, and the quinine was given as prescribed. The disease was jugulated.

CASE 163.—*Gun-shot Wound.*—Sept. 5th. A young Indian man, a brother of "The Weaver," whilst endeavoring to rectify some little derangement in the mechanism of his loaded pistol,

in a smithy, on being foiled in his attempt, flew into a rage, seized it by the muzzle, bestowed a profane expletive upon it (he spoke English,) and struck the window sill a severe blow with its lock. The abused weapon promptly retaliated by "going off," throwing its saturnine contents into his hand, and scorching the same with its exploding powder. I was absent, but returned in an hour or two. Found him in great apparent agony, and his hand swathed loosely in cotton cloths. There had been (and still was) considerable hemorrhage. The ball and wadding had entered the central part of the palmar surface of the hand, producing great laceration, and everting, with ragged edges, the two bellies of the flexor brevis pollicis. The ball continued up the forearm, and made its exit about six inches above the wrist. The entrance and adjacent parts were severely scorched.

℞. Washed the wounds with tepid water, applied a compress and roller to arrest the hemorrhage, and administered about half a gr. of the muriate of morphine. The compress was kept saturated with cold water; in a short time the hemorrhage ceased, and the pain subsided.

The after treatment consisted principally in cold water dressings, (until suppuration commenced,) anodynes to allay pain, and castor oil, sulph. of magnesia, and senna tea, to obviate costiveness. The pain, two or three times a week, became excruciating, and required for its subjugation decided doses of opium or a salt of morphia. For two weeks or more the wound of the hand was troublesome; but after that period pain ceased to recur, and the parts healed.

I have, during the twenty-eight years of my practice, incidently treated a considerable number of gun-shot wounds, and have never had a case terminate in tetanus. This exemption I have been inclined (it may have been erroneously) to attribute to the free and prompt use of opium or some of its preparations.

(TO BE CONTINUED.)

ART. XVII.—CASE OF TYPHOID FEVER

FROM THE RECORDS OF MAISON DE SANTE—KNOXVILLE, TENN.

BY JOHN W. PAXTON, M.D.

The subject of this case is about 24 years of age, tolerably muscular, general health heretofore good, and of good moral habits. Was requested to see him Oct. 26, 1855, at his room. Found him complaining of headache, pain in the back and general *malaise*, which had been preceded by a chill. Ordered a blue mass pill, grs. XX, at bed-time, with a good bath. Feeling somewhat better the next day, he got up contrary to orders, went out and attended to his store, and had another chill at noon. Ordered Thoroughwort tea, with foot-bath; also,

℞.—Quinine,. - - grs. xij.
Ft. Pulv., - iij.

and take one powder every three hours, commencing at day-light next morning. The quinine acted freely on his skin, and he improved under its use. It was continued for two days, when his skin became hot, though moist, and he was removed to the *Maison de Sante*, Oct. 29, at 2 P. M. His removal caused no inconvenience, and he presented the following condition:—Tongue coated yellow, though moist, pulse 80 and hard, skin moist but hot.

℞. Neutral Mixture during the day, and at bed-time a warm bath.

29.—During night his bowels have been quite loose, and are somewhat tender this morning. Continue the Neutral mixture, alternating every two hours with the following prescription:

℞.—Sulph. quinine, - - ij grs.,
Camphor water, - ℥vi.

M. S. Take a tea-spoonful every two hours as above. Apply volatile liniment to bowels, and afterwards a ley-poultice.

30.—Though he rested well during the night, and his skin is moist, yet he is feverish—pulse 90, soft and compressible, tongue moist.

℞.—Thoroughwort, - - ℥j.,
Water, - - - - pt. 1.

Make decoction and take a wine glass full every two hours, al-

ternating with the prescription of yesterday. Warm bath at bed-time.

Nov. 1.—Condition the same, red at tip of tongue, bowels very loose, discharges thin and offensive, and very tender.

℞,—Sulph. morphia, - gr. j.
Sulph. magnesia, - - ℥ij.
Camphor Water, - ℥vj.

M. S. Take a tea-spoonful every two hours—warm poultices to bowels. This had the effect to move the bowels twice during the day, but still offensive. Ordered an enema at bed-time if not moved more freely.

Nov. 2.—Rested only tolerably during night, skin rather hotter than before—pulse 90, bowels running a good deal, thin and yellow.

℞.—Sulph. morphia, - gr. j.
Camphor water, - - ℥vj.

M. Tea-spoonful every two hours.

During the afternoon more comfortable; skin hot and dry, pulse 96, tongue coated.

℞. Dovers' powder, grs. iv., at 5 P. M., and repeat at bed-time. Bathe feet well.

Nov. 3.—Pulse 95. Rested pretty well during night, bowels moved scantily twice, of same character, still tender to touch, tongue improved in appearance.

℞.—Nit. potass, - - ℥jj.
Spts. Nitre, - - - ℥ss.
Water, - - - ℥jjjss.
Tart. Antim et Pot., - gr.j.

M. S. A tea-spoonful every two hours. Continue fomentations.

Nov. 4.—Rested well; sweat profusely, skin being still moist, and also feverish, pulse 82, tongue still coated yellowish brown, bowels tender over right iliac region, moved once this morning, thin and yellowish.

Continue prescription of yesterday, alternating with morphine.

Nov. 5.—Tongue cleaning off, pulse 86, an almost entire ab-

sence of fever, bowels moved once, and less tender. Continue prescription.

During afternoon, fever rose, bowels were moved freely, stools being thin and yellowish brown, pulse 88, and soft.

℞.—Dovers' powders, grs., - - xxiv.
Ft. Pulv., - - - - - jjj.

Take one every three or four hours, and bathe feet well at bed-time.

Nov. 6.—Rested well; tongue cleaning, pulse 80, skin cool and natural, or nearly so.

℞.—Castor oil, - - - ℥ss.
Spts. Turpentine, - ℥j.

M. Take at once.

5 P. M.—Oil operated three times pretty freely, feels quite comfortable, skin cool and pleasant, pulse natural.

℞.—Dovers' powder, gr. - - xxi.
Ft. Pulv., - - - - - iij.

Take one every three hours, apply poultice to bowels, and bathe feet at bed-time.

Nov. 7.—After a tolerable night's rest, he feels comfortable this morning; skin cool, though tongue drier and pulse 80. Ordered the prescription of the 3rd day.

At 4 P. M., however, there was a feverish condition of the skin and system, with dryness of tongue and fauces, and pain in right iliac region.

℞.—Blue mass, - - grs., xx.
Ipecac, - - - grs. ij.
Ft. pills, - - - iv.

Take two at once and two at bed-time. Use volatile liniment to side, and subsequently a lye-poultice, and bathe the feet.

Nov. 8.—Rested badly, pain in side severe, pills not acted; tongue drier, pulse 78, skin soft and dry. Continue the Nitre prescription after the pills operate. Mustard Cataplasm to side.

4 P. M.—No action from pills, tongue moister, pain in side lessened,

℞.—Castor oil, - - - ℥ss.
Spts. Turpentine, - ℥j.

M. At 6 o'clock, if pills have not operated previously; after whidh Dovers' powders, grs, vj,, every three or four hours, with poultice to side.

Nov. 9 and 10.—Continued much the same, bowels being moved by an enema, and being kept on Dovers' powder at regular intervals.

Nov. 11.—Found it necessary to administer Oleaginous mixture in table-spoonful doses three times a day; but disagreeing with the stomach, it was substituted with the saline draught every few hours. Pain in side continuing, applied a blister of cantharides, 4x6.

On the 12th and 13th there was an evident abatement of all the symptoms. He was restless at night, but that was attributable to the blister. His tongue became moister, skin more natural, pulse good, and secretions generally active. Continued during these two days the saline draught.

The patient continued to improve, and was discharged on the 18th from medical treatment.

ART. XVIII.—CASES OF TYPHOID FEVER.

FROM MY CASE BOOK.

BY RICHARD O. CURREY, M.D., KNOXVILLE, TENN.

M. B., aged 12, female, had been sick five days before coming in charge, on the 6th of Oct., 1854,

Condition.—Pulse 120, small and thready, skin dry and moderately hot, bowels hard and hot, tongue coated thickly in middle, and dry, while red at tip and edges; difficulty of swallowing, thirst, bowels sluggish, sleepless, while mind at times wandering. Urine scanty and high colored, She had been receiving medicine from some one, yet the family was unable to tell what. Ordered her to have calomel, 1 gr. every two hours, till she had an action from her bowels, after which give six grains of Best Turkey Rhubarb.

After taking 6 doses of the calomel her bowels were moved, though no manifest abatement of the symptoms. Her fever still continuing, left the following prescription:

℞.—Citrate of potash, - - ℥iiss.
Water, - - - - ℥viiss.
Spts. Nitre dul. - - ℥ss.

M. Take two tea-spoonfuls every two hours, till perspiration is excited. Diet, rice water, and drink slippery elm water. By the second day of attendance, but eighth of sickness, petechio were found profusely scattered over legs, body, arms and neck. One cheek deeply flushed. No abatement of symptoms. There was in addition pain in right iliac region, and distension of bowels, and picking at bed-cloths and in air. Continue diaphoretic, and if bowels not moved at 3 P. M. of this, the 8th, take

Castor oil, - - - ℥iss.
Spts. Turpentine, - gtt. v.

With fomentations to bowels.

9.—Patient much improved; in morning pulse 100, and subsided still lower by evening to 90; skin moist, voice which had been husky, has become clear and natural, countenance, which appeared anxious and ghastly, looks more cheerful. Diaphoretic continued through the day.

On the 10th, it was necessary to administer a dose of Castor Oil and Spts. of Turpentine, as bowels had become sluggish; symptoms favorable, pulse 84, and soft.

11th.—As the fever seemed to be diminished, skin moist, and pulse 84, prescribed the infusion of serpentaria, ℥ss to a pint of boiling water. After infusing for two hours, to take a table-spoonful every two hours, while there was no fever.

12th.—Pulse lessened to 80, all the secretions active, and she is approaching convalescence. Continue infusion of serpentaria, and on the 13th she was discharged from farther medical attention, the seventh day of medical service, but the 13th day of sickness.

Case 2.—*Hetty W.*, aged 12, came under charge on the 7th of October, 1854. She had been complaining for six days of general *malaise*—head-ache, flushes of heat, weakness and loss of appetite, and had been prescribed for, but not seen, by a Physician, giving calomel, to be followed by castor oil. When first seen she presented the following

Symptoms:—Head-ache, restlessness and very nervous, general febrile heat of surface of skin, which is also dry, and has a harsh feel. Pulse 110 and small, bowels sluggish. Pain over right iliac region; tongue coated white, tip and edges red, tonsils tender and somewhat inflamed. Ordered Hyd. cum creta, grs. vi, to be taken at once, and to be followed in three hours with a mixture of Turkey Rhubarb and Calcined Magnesia.

This had the effect, by the next day, to produce evacuations from bowels, without producing any diminution of the febrile heat. But pulse still continued at 110, with cheeks highly flushed, and urine scanty. Ordered hot fomentations to the bowels, and the following diaphoretic:

R.—Citrate Potash, - - ℥ijss.
Spts. Nitre, dulc., - ℥ss.
Water, - - - - ℥viss.

M. Take a large tea-spoonful every two hours.

The bowels continuing to be acted upon some four or five times, of a dirty ash color, thin and of a peculiar odor, added to each dose of the diaphoretic five drops of laudanum till they were somewhat checked.

Monday, 9th.—Pulse decreased to 100, but rose by 4 P. M., to 110. There is an aphthous appearance of the gums. Only one operation during the night. Continue the diaphoretic during forenoon. It had the effect to produce a slight moisture on forehead, palms of hands and soles of feet, and says she feels easy and well. Tongue peeled off in contre, leaving a dry, red surface. No movement on bowels to-day. Continued the diaphoretic, and ordered at 9 P. M. if bowels not moved,

Castor oil, - - - - ℥i.
Spts. Turpentine, - - 5 drops.

Tuesday, 10.—Pulse 96 in morning, slight perspiration on forehead, and the diaphoretic was continued every three hours; but by 2 P. M. her fever again increased, and bowels became tympanitic tongue whitish and dry, very restless.

R.—Emulsion of Gum Arabic, - - ℥ij.
Sugar, - - - - - ℥j
Spts. Turpentine, - - - - 48 drops.

Mix and agitate well before using. Take a tea-spoonful every two hours.

A distinct remission having been observed at 11 o'clock last night, ordered 2 grains of quinine to be administered if it again recur. Reapply hot poultices to bowels, and sponge the arms and face with cool water.

Noticed to day the presence of the rose colored eruption on inside of thigh and groins.

Monday, October 11.—The rose colored spots had extended over abdomen. A distinct remission having again appeared last night, the quinine was given. Lies quiet and easy, pulse 96, slight fever, tongue as yet dry; bowels less tympanitic, moved once during night.

R.—Hyd. cum creta, - - grs. iv.
Ipecac, (Sine Ligno,) - gr. ¼.

To be followed in two hours by the usual diaphoretic, if skin is hot and dry; also sponge surface. During the day pulse declined to 90 pulsations, and a natural perspiration broke out; tongue also becoming moist. Continue diaphoretic.

Thursday, Oct. 12.—There was again this morniag a paroxysm of fever, pulse rising to 108. As bowels were sluggish, ordered

Castor Oil, - - - - 3i.
Spts. Turpentine, - - - 5 drops.

During the afternoon it acted upon the bowels two times, producing yellowish watery operations. Her skin is however moist, pulse at 96, and no headache, though she expresses herself as feeling bad.

R.—Tinc. Cinchona, - - 20 drops.
Arom. Syr. Rhei, - 40 "

Into which mix Dover's Powder one grain, which give and repeat at 9 P. M.

Friday, October 12.—About same condition as on yesterday. Pain on pressure over cæcum and over spleen. Continued the prescription of yesterday at 9 A. M, and at 3 P. M., while at 12 M. give the syrups without the Dover's Powder.

On the 13th, continued same prescription with poultice to bowels. Pulse at 96 to the minute, evacuations too thin.

14ht.—Pulse 78, no fever, a general improvement.

R.—Rad. Serpentaria, - - - ʒi.
Boiling water, - - - - 1 pint.

Two teaspoonfuls every two hours.

15th.—Improving. Continue inf. serpentaria.

And on 17th, was discharged; being the 10th day of medical treatment, and the 17th of sickness.

Case 3.—In same family, a boy aged 12, was also taken sick during the illness of the foregoing case. The onset of his attack was with a chill at night, followed by a headache and fever. This was on the 12th Oct. When seen in the morning, his pulse was 120, abdomen tumid, skin dry and hot, cheeks flushed, tongue coated, whitish, papillated. Pain in bowels in right iliac region, slight soreness of throat. These symptoms prevailed for several days, his pulse rising on the second day to 132. Urine became scanty, amounting to an almost total suppression for one day. At first his bowels were sluggish, but a dose of Castor Oil and Turpentine having been administered, they operated rather freely for several days. The most prominent symptoms in his case were the scantiness of the urine, the irratibility of his bowels, pains over right iliac region, and over spleen.

Treatment consisted of a preliminary dose of Hyd. cum creta and Ipecac, 4 grs. to ½ gr., with the use of neutral mixture in conjunction with sweet spirits of nitre, whenever skin was hot and dry; cool sponging, and oil and turpentine as an aperient. When the fever had begun to subside, and pulse lessen in frequency, the aromatic syr. of rhubarb and tinct. Cinchona was used as a tonic. His bowels were controlled by means of an occasional dose of Dover's Powders, and when convalescence manifested itself, he was put upon the use of the inf. of serpenteria.

He was discharged on the 23rd, the eleventh day of medical attendance, and of his sickness.

[TO BE CONTINUED.]

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

A Manual of Pathological Anatomy. By CARL ROKITANSKY, M.D., Curator of the Imperial Pathological Museum, and Professor at the University, Vienna. Translated from the last German Edition, by William E. Swaine, M.D., Edward Sieveking, M.D., Charles H. Moore, and George E. Day, M.D. Four volumes in two. Philadelphia: Blanchard & Lea. 1855.

These valuable volumes of the Sydenham Society have been offered by the enterprising Publishers in a new and cheaper edition, so that any one may possess the writings of the greatest of Pathologists.

Our Author.—We cull from the Editor's preface a few facts respecting the life and labors of our Author. He was born in Bohemia, educated at the Gymnasium of Leitneritz, and graduated in 1828 at Vienna. First acting as an Assistant in the Pathological-Anatomical Department of the University, in 1834, he was appointed Professor of Pathological-Anatomy. Being the sole medico-legal Anatomist, it fell to him to examine all those cases of death through the metropolis, which bore a suspicious character. Thus during his labors it is said he examined 30,000 corpses, and was thus prepared to give to the world a work on every page of which is plainly seen the traces of the hand of a master-spirit. This entire book evidences his zeal, and the extent of his investigations in Pathology. All of these researches were made upon the dead subject. Such was the magnitude of the labors required of him, and such his close application to them that he knew nothing of the cases previously to their being brought to him for a post mortem examination. He was therefore enabled to prosecute his examination without any preconceived opinion as to the nature of the disease under which the patient succumbed. His examination, therefore, attested the truth or the falsity of the diagnosis formed by the attending Physician. The benefit of this course is apparent. Both would be incited to great diligence and care in the discharge of their respective duties.

But this work is too extensive to admit of general notice or

critical analysis of its various parts and chapters. We think we can better subserve the interests of science by directing attention to some one particular subject, in which the author's style, and his genius may be plainly set forth. And as the original department of the present number discusses mainly the nature and treatment of Typhoid Fever, we desire to present the views of our Author on the *Typhous Process in the mucous membrane of the small intestines.* Our author says on page 68, Vol. 11:

"An acquaintance with the many anomalies of this process is of such importance, that we would not trust a person ignorant of them to judge of a post mortem examination in a case of acute fever."

He presents four stages of this process:

1. The Congestive Stage.

2. The Stage of Deposition of the typhous products, of typhous infiltration; the crude stage of the deposit.

3. The Stage of softening and rejection of the typhous deposit.

4. The stage of the genuine typhous ulcer.

Here is presented a regular gradution, and according to the activity with which these stages follow each other is the duration of the typhous attack. It will be readily seen also that the chances for recovery from this disease does not depend upon the relative rapidity or slowness with which they succeed each other. It is the same typhous process, and all its stages will be passed through unless arrested by the proper medical treatment.

First stage is that of infiltration, with marked catarrhal and gastric symptoms, and the venous system of the mucous membrane of the small intestine is congested, possessing a slaty discoloration, and a peculiar dirty yellow gelatinous mucus. This is observed from above downward as far as the cecal valve.

"The mesenteric glands are slightly swollen, their bloodvessels are injected, the tissue itself is elastic, soft and dark colored."

"In the second stage the congestion is diminished; the injection and reddening, and even the swelling of the mucous membrane, retract within circumscribed spaces which correspond with Peyer's agminated glands, or occasionally with solitary follicles. Rounded or more commonly elliptical tumefactions (plaques,) va-

rying in thickness from half a line to three lines, are formed, which result from the *deposition of a peculiar substance* in the tissue of the Peyerian plexus and of the submucous cellular tissue. They are surrounded by a vascular wreath which stops short at their circumference, and by a marginal plane which rises abruptly, or if contracted, so as to appear pediculated. In the latter case they the more resemble flat sessile fungi, as they often present an umbilical indention at their centre."

"The lower third of the small intestine is the common seat of typhous infiltration, and the typhous spots are placed at the side opposite to the insertion of the mesentery; they increase in number towards the cæcal valve. They vary in size from that of a sixpence to half-a-crown; towards the terminal porton of the small intestine, in correspondence with the extensive glandular apparatus that exists here, they occupy a space of several inches, and end upon the ileal surface of the valve. Near and between the patches we find single, round, nodulated tumors of the size of a hempseed or pea, surrounded by a similar vascular wreath; these represent the typhous infiltration of a solitary follicle."

"On minute examination of the morbid product, it proves to be deposited under the mucous membrane and in the submucous tissue, without involving the muscular coat. It presents a substance of more or less density, of a pale-red color and fibro-lardaceous texture; it is occasionally traversed by streaks of blood. The deposit very rarely extends beyond the follicular apparatus."

"The commencement of the third stage is marked by a return of violent congestion to the small intestine. The vessels, and especially the veins of the mesentery and their ramifications between the intestinal coats, are filled with dark-purple and viscid blood. The mucous membrane again swells, the vili in particular tumefy, and on pressure, exude a grayish-white opaque serum.

"The most remarkable change is now effected in the typhous patches and in the mesenteric glands: they soften.

"The intestine is more or less distended with gas (meteorismus;) it also contains yellow or brownish muco-gelatinous or biliary matters, mixed up with grumous, furred particles; it always occupies a low position in the hypogastrium, and even sinks into the pelvic cavity. The cæcum is very often found to contain the trichocephalus dispar in larger or smaller numbers.

"Fourth stage. After the morbid product has been detached, a cavity remains on the internal surface of the intestine, which represents the true typhous ulcer."

The true typhous ulcer is:

1. Of an elliptical, round or irregular form.

2. Its size varies from a hemp-seed to that of a half crown.

3. The position of the ulcer is nearly always opposite the insertion of the mesentery.

4. There is a well defined fringe constituting the margin.

5. The ulcerative process is located in the small intestine, especially at the lower third.

The cure of the typhous ulcer is generally effected in the following manner:

"The fringe of mucous membrane which lies upon the base of the ulcer, gradually connects itself from without inwards, with the cellular tissue that invests the base, and uniting with it becomes paler and thinner. At the same time the cellular layer becomes whiter and denser, and is finally converted into a serous lamina, the circumference of which is dove-tailed between the muscular and mucous coats. The margin of mucous membrane is levelled off in such a manner, that the union is imperceptible; the former does not advance uniformly on all sides towards the centre of the ulcer, hence the elliptical is converted into a sinuous, the round into an elliptical ulcer. At the same time the margin, as well as the neighboring mucous membrane, are thinned down in such a manner, that at last their villi appear to have been transferred to the serous lamina. The edges unite finally at one or more spots, and coalesce. We have sometimes observed, that long before the union of the edges, small villosities formed independently on the serous lamina, a fact which has been also remarked by Sebastian.

"Instead of the ulcer we find, in proportion as the above process is effected, a slight depression on the internal surface of the intestine, dependent upon the thinning of the mucous membrane and its connection with a thin cellular layer of denser structure —or we find a spot at which the mucous membrane is more firmly attached and less moveable, in the middle of which, by oblique light, we may often discover a smooth remainder of the serous lamina of the size of a millet-seed; or, if even this is not the case, we discover a spot at which the mucous membrane is more tense, void of plicæ, smooth, less vascular than the surrounding portion, and particularly less villous.

"Such cicatrices have occasionally been observed thirty years after the typhous had occurred.

"It is singular, and characteristic of the typhous ulcer and its cicatrix, that it never in any way gives rise to a diminution of the caliber of the intestine."

There are other organs affected during the progress of the typhous proeess. Thus in the abdominal cavity we find enlargement of the spleen, and the organ becomes friable and is changed to a dark purple.

In the thorax we have a peculiar catarrh, with a dark red discoloration, and the secretion of a viscid gelatinous mucus.

The nervous system is variously affected. The amount of blood in the brain and spinal cord varies in degree or quantity from hyperæmia to anæmia. And our author ascertains the same fact as was established by the investigations of Rey, that the characters of genuine inflammation are not discovered in the nervous system, during the existence of this disease.

Our author then proceeds to discuss the anomalies of this disease with reference to the *amount* of the typhous process and to the *quality*.

One more extract with reference to the quality of this process, and we close this notice:

Perforation of the intestine by the typhous ulcer constitutes a very remarkable phenomenon. How is this effected? The typhous process invariably meets with an isolating tissue in the lower stratum of the submucous cellular layers and of the muscular coat; the destructive process which occurs beyond the mucous membrane, is therefore not the result of a previous typhous affection (infiltration,) but of an essentially distinct process. It is this that affords a marked distinction between the perforating typhous and the perforating tubercular ulcer. The process by which perforation of the intestinal parietes at the base of the ulcer is effected, is softening or mortification of the tissue; the slough that results only affects the deepest parts of the ulcer to a small extent, and we rarely find the orifice larger than a pin-hole, or a millet or hemp-seed.

The varying period at which in the course of typhus the ulcer degenerates in this manner, is remarkable, as also the rapidity with which occasionally the perforation is effected. We have observed it occur rapidly in ulcers that had scarcely formed, whilst the remaining morbid growths were engaged in the metamorphosis, or even in the crude stage; and again we have seen it occur slowly or quickly at every subsequent stage; long after the termination of the local process, and even after the genuine typhous had subsided into the atonic ulcer.

The consequence of the intestinal perforation, and of the re-

sulting effusion of the intestinal contents into the peritoneal cavity is peritonitis; it generally gives rise to tolerably copious, but uncoagulable and liquid exudation; it frequently takes place even before actual perforation has ensued, and is developed as soon as the process of perforation approaches the peritoneum.

The exudation commonly induces an adhesion between the perforated coil and another coil, or between its mesentery and the pelvic parietes; which may certainly be looked upon as an effort of the *vis medicatrix naturæ*, but which our investigations have proved, never to effect a radical cure of the typhous perforation of the intestine."

But our readers will avail themselves of the first opportunity to possess this most valuable of works on Pathological Anatomy.

R. O. C.

EDITORIAL NOTICES.

NELSON'S LANCET

Is now published weekly. But where are his contributors? The last No. received is filled entirely with selections. Again we ask, why are Physicians so loth to write?

☞ Dr. Reese has instituted suit against Dr. C. H. Cleveland for an infringement of his copy-right in the *Pronouncing Medical Lexicon.*

☞ There are several Medical Bills of importance now pending before the Tennessee Legislature. One relates to the appointment of a Board of Examiners for each grand Division of the State, from whom licences for practising medicine must be obtained. Also, another bill to sell the Hospital and grounds at Nashville, and appropriate the proceeds to the establishment of Hospitals in Knoxville, Nashville, and Memphis. The buildings and grounds at Nashville are worth at least $75,000.

Also another Bill to charter the Jackson Medical College at Nashville.

☞ Prof. John Torrey has resigned the Professorship of Chemistry in the College of Physicians and Surgeons, New York, and the vacancy has been filled by the appointment of Prof. Le Conte, of the University of Georgia. A worthy successor to a worthy predecessor.

☞ We publish under our editorial head, an extract from "AN INQUIRY INTO THE DUTIES OF MEN, by Thomas Gisborne, M.A." Five editions of this work were issued between the years 1794 and 1800; the fifth edition, and probably the last, was published during the year 1800, in the city of London. The intrinsic merits of the work make it an appropriate book for every year of each succeeding century, and for every class of men embraced in the inquiry, from the peers of England to the trades-

men. On the duties of the Physician, Gisborne has much which the refined and educated members of the present day will not only approbate, but which he practices; and which, from time to time, shall be presented to the readers of this journal. Facts frequently presented, in different clothes, are still the same, only rendered more pleasing from the variety of vesture, to those who under all circumstances appreciate them, while others will receive them when presented in one measure or style, who have rejected them when otherwise conveyed.

"If the physician always bears in mind that the value of knowledge is proportioned to its practical utility, he will consequently be solicitous to render all his attainments subservient to the happiness of others as well as to his own. This leading desire of promoting the glory of God by contributing to the welfare of man, will induce him to communicate to the public, through some proper channel, selected according to the circumstances of the occasion, and with that perspicuous simplicity of style which befits didactic writing, every beneficial discovery at which he may have arrived, either in the course of his private studies or of his professional employment. He will not subject himself by committing his thoughts to the press without sufficient previous inquiry, to the charge of purloining the discoveries of others; nor of being vain of communicating what is either unworthy of notice, or as yet but feebly and imperfectly developed, or hastily inferred from few and inadequate trials. In the recital of facts he will not neglect to state everything fairly and fully, as well as what seems to corroborate the conclusion which he deduces, as those things which appear indifferent, or meditate against it; nor will he artfully throw the latter circumstances into shadow, while he brings the former into the strongest light. If, in consequence of any thing which he has done, or of anything which he has published, he should find himself driven into a controversy, let him conduct the literary warfare with becoming temper. Let him neither display nor feel bitterness towards his antagonist; let him overlook and freely forgive any acrimony which may chance to be manifested towards himself. By supporting his own argument, while he thinks them just, without being dogmat-

ical; and by candidly giving them up, when he finds them erroneous; let him shew that he is less anxious for victory than for the elucidation of truth.

The Medical Journals of eminence published in foreign countries, as well as those established in his own, will properly engage his attention. From the one and the other he will probably derive very important assistance in the discharge of his duty as a Physician. Particular caution, however, may be requisite in the practical application of the intelligence which he gains from the former sources, as remedies and modes of treatment which are crowned with success in one country, may prove by no means suited to patients, who live in another climate, and in very different habits of life.

THE SPIRIT OF THE HOME JOURNALS.

American Journa of Pharmacy.—J. M. Maisch, of New York, recommends the following formula for the administration of Cod Liver Oil:

℞.—Calcined Magnes., - - j scru.,
Rose Water, - - - - ℥i.
Cod Liver Oil, - - - ℥ij.
Syr. Rasberry, - - - ℥vi.
Water of Bitter Almonds, - ℥ij.

M.

℞.—Potass. Carb., - - ℥ss vel ℥i.
Orange Flower water, - ℥i.
Honey of Roses, - - ℥i.
Cod Liver Oil, - - ℥ii.

M.

R. F. Fairthorne, of Philadelphia, states that Labarraque's solution of Chlor. Soda, mixed with a solution of *Sulphate of Morphia*, U. S. P., produces a light orange colored transparent mixture. The salts of morphia, with the same test, afford a dark orange.

Base Fraud.—Some one has availed himself of the well known initials of F. P. & W., (Powers & Weightman,) to perpetrate a base fraud by filling vials with fine crystals of oxalic acid, and selling them as strychnine. The perpetration seems to have been detected at Cincinnati, where some was purchased by the Druggists of a young man because he was offering it at a *cheap price.* Beware of cheap drugs and cheap medicines at all times.

New York Medical Times.—W. H. Van Buren, M.D., of the New York Hospital, reports three cases of dislocation of femur —two of which were reduced by manipulation, and the third by means of compound pulleys. He approves of *perfect* etherization, as only then is there *entire* muscular relaxation.

A correspondent recommends the following formula as constituting a a pleasant and efficient laxative.

Alex. senna. leaves, recently pulverized, - ℥i.
Coriander Seed, " " - - ℥ss.
Fresh Figs, chopped up, - - - - lbj.
Mix thoroughly. Dose—One to four drachms.

The test for Cod Liver Oil is strong sulphuric acid, which produces a violet color, changing to purple in the pure oil.

Nelson's American Lancet for January 21, (it is a weekly,) publishes a form for an Indemnity Bond. As he says, truly, it cannot shield a physician who is guilty of gross ignorance, wilful neglect, or glaring incompetency, but is for the benefit of those who have a good knowledge of their profession, and observes due diligence in reducing and attending to dislocations or to fractures. It is as follows:

FORM OF INDEMNITY BOND.

STATE OF , }
COUNTY. }

KNOW all men by these presents: That I, (*we*,) of the town of , in the county of , and State of , am (*are*,) held and firmly bound unto , practising Physician and Surgeon, of the town of , in the county of , and State of , in the sum of dollars, lawful money of the United States, to be paid to the said , physician and surgeon, his executors, administrators, or assigns; for which payment, well and truly to be made, I (*we*) bind myself, (*ourselves*,) and each of my (*our*) heirs, administrators and executors, jointly and severally, firmly by these presents.

Sealed with my (*our*) seal. Dated this day of , one thousand eight hundred and fifty .

Whereas the above bounden, has this day applied to, and requested the said , physician and surgeon aforesaid, to set and reduce a fracture (*or*) dislocation of , in (*self, wife, child, or adopted child*,) of the above bounden : Now, therefore, the condition of this obligation is such, that if the above bounden , shall well and truly keep and bear harmless, and indemnify the said , physician and surgeon aforesaid, his executors, administrators, and assigns, and all and every person or persons aiding and assisting him in the premises, of and from all harm, let, trouble, damages, costs, suits, actions, judgments, and executions, that shall, or may, at any time arise, come, or be brought, against him, them, or any of them, as well for the setting of said (*arm, leg, etc.*,) as for the inconve-

cily, and the Mediterranean, and that Augustine lies on the same with Cairo and Morocco, and after enumerating certain requisites to appertain necessarily to a healthy locality, such as uniform and equal temperature, freedom from dampness of air, Dr. G. says, "Thus is it, that the atmosphere of the interior of Florida covers all these indications; thus can the consumptive enjoy all the advantages climate is able to bestow. Here is a pure, dry and genial atmosphere; here, a mild and equal temperature; here, throughout the year, can free and constant exercise be taken, in the open air, without risk, danger or exposure."

Prof. S. H. Dickson publishes a very able paper on the *Legal Consequences of Insanity.* He offers the following relations in the settlement of the question of the sanity of an individual:

1st. Is he disposed to injure himself? does he commit suicide?

2nd. Is he violent or malicious? will he injure those about him?

3d. Are his perceptions accurate? may he be trusted as a witness?

4th. Is his judgment sound enough to guide him in the common affairs of life? may he be trusted with the transaction of his own business, and the distribution of his property by will?

A case of Tetanus, resulting from running a nail in the foot was treated by Dr. Gaston, of Columbia, S. C., very successfully, by the continued use of a mixture composed of Comp. tinct. of Lobelia inflata, Cayenne pepper, gum myrrh and rad. valerian, in doses of table-spoonful every hour, till muscles relaxed. The irritability of bowels and stomach were counteracted by sulph. morphia.

St. Louis Medical and Surgical Journal.—Thomas Reyburn, M.D., reports, in a correspondence from Paris, an operation performed by M. Aran, consisting in tapping the pericardium and injecting it with solution of iodine, for the cure of pericarditis. The subject had had an attack of pleurisy, and one month after its disappearance manifested all the symptoms of pericarditis. The trocar was introduced slowly and cautiously in the fifth intercostal space. The fluid flowed in jets, being a reddish colored

from their bowels only every two, three, four, or five days, of hard fæcal matter, have now a passage from their bowels daily, of soft fæcal matter.

That those who are in the habit of having a passage daily, of solid fæcal matter, have now two or three passages daily, from their bowels, of soft fæcal matter.

That those who usually require laxatives to keep their bowels free, now do not require laxatives; or, if they take any, they find that one-half, one-third, or one-quarter, the usual dose has the same effect as a full dose had formerly.

And further, that it is now dangerous to give a full dose of purgative medicine, lest this dose should induce diarrhœa, followed too often, by fatal cholera. The *Medical Times*, of September, 1854, page 272, contains the report of four cases of cholera, which were induced in St. George's Hospital here, by the administration of the full dose of purgative medicine, and of which one died.

That, further, every individual in the locality is troubled with more flatus than usual, especially between one and five in the morning, and that every one about to be attacked with diarrhœa has a pressure, and a weight on the sphincter of the anus, and a feeling of insecurity, as if, at any moment, he would lose command over it.

If, in consequence of the observations and of the researches of the profession in every country, it is ascertained that this change in the constitution of all the individuals in a locality where cholera is about to break out, does take place, and that this change persists while cholera rages, and after it has passed away some time, it may throw some light on the etiology of the disease, and prove that cholera is not a contagious disease.

Charleston Medical Journal.—Prof. Hume ably answers Dr. Mackall, and contends for the importation of yellow fever into Charleston in opposition to the theory of its domestic origin.

Florida has long enjoyed a bright reputation from the salubrity of its climate, and the uniformity of its temperature as the retreat of the invalid, especially those of a consumptive tendency. But as some doubts exists as to her ability to sustain this reputation, Dr. E. S. Gaillard, of Jefferson county, comes forward in a series of articles on the Topography of Florida, to advocate her claims. After stating that Pensacola and Tallahassee possess the same iso-thermal line with Portugal, Spain and Si-

nience and damage arising therefrom, then this obligation to be void, else to remain in full force and virtue.

Sealed and delivered, in presence of } [L. S.] [L. S.]

Northwestern Medical and Surgical Journal.—The only communication is from the pen of its Editor, Dr. Davis, on the Pathology of Fevers. He defines *Fever* to consist essentially in a disturbance of the elementary properties of the whole body; while the particular character of the fever will depend on the *direction* given to the altered properties.

If tonicity and susceptibility throughout the tissue is increased, then the fever is inflammatory. If, however, they are depressed, it will assume a *typhoid* character.

The New York Journal of Medicine, for January, contains a well executed steel engraving of J. Romeyn Beck, M.D. LL.D., and a Bibliographical sketch written by E. H. Van Deusen, M.D. Born in 1791, he graduated in Medicine at the College of Physicians and Surgeons, New York, and in 1815 was appointed Professor of the Institute of Medicine and Medical Jurisprudence. In 1817, he became Principal of the Albany Academy, abandoning the general practice of Medicine entirely. But in 1841 he became Professor Mat. Med. in the Albany Medical College. He was for a long time editor of the *American Journal* of Insanity, and the author of a valuable work on *Medical Jurisprudence.* He died Nov. 1855, in the 65th year of his age.

Dr. David Maclaughlin, M.D., of London, England, replies to Dr. Hutchinson, adducing additional observations on the invariable existence of a *premonitory diarrhœa* in cholera. Dr. M. says, when speaking of the general tendency that prevails at the time of an outbreak of cholera:

I have now seen five severe outbreaks of cholera, and I have reason to believe that a great and an important change takes place in the constitution of every individual, where epidemic cholera is about to break out, which change in the constitution of every individual, persists while the disease rages, and after the disease has passed away for some time.

That this change in the constitution of individuals is manifest by the facts, that those of a costive habit, who have a passage

larged liver, and judged of by palpitation and percussion is regarded as an important sign, being present in 90 out of 101 cases.

The Urine was found to be but slightly effected.

The stools may be regarded as unfavorable when, 1st. Black, watery stools, like coffee grounds. 2ndly. Stools containing coagula of blood, or grumous blood; these are rarely observed till towards the close of the case. With respect to those cases in which perulent matter was passed in the stools, it was very evident that in some instances this depended upon the abscesses in the liver opening into some part of the intestinal canal; but in others, no distinct communication was found to exist after death, between the abscess and the intestines, although in some the abscess was adherent to some portion of the intestinal parietes. In the remaining cases, no apparent communication whatever appears to have existed. The question, how, under these circumstances, purulent matter was passed by stool, remains to be solved by future inquirers." (p. 156.)

Note on some of the Medical Uses, as an Internal Remedy principally, of the Muriate of Ammonia. By H. A. Ebrden, M.D. (Indian Annals of Medical Science, April, 1854, p. 552.

The author has written this paper under the conviction that the hydrochlorate of ammonia (sold in the native Indian bazaars under the name of "nausaada,") is not sufficiently appreciated by English practitioners as an internal remedy, and states his conviction, after a full trial of its merits, that it is a very valuable and powerful remedy for the relief of neuralgic pain generally. The disease in which he states that he has given it with success are facial neuralgia, tic-douloureux, nervous headache, toothache, clavus hystericus, sciatica, and neuralgic dysmennorrhœa. He usually prescribes it in doses of twenty-five to thirty-five grains in an ounce of mint water or camphor mixture every twenty minutes for three doses. The second dose is usually sufficient for the relief of the immediate pain; but he has observed that where it has been necessary to repeat and continue the doses, the patient has, in many instances, afterwards enjoyed a comparative immunity from the recurrence of pain; and he has, therefore, been led to continue the exhibition of the salt systematically, at six or eight hours' interval, for seven days. Externally applied,

RECORD OF MEDICAL SCIENCES.

Edward John Waring, Resident Surgeon at Travancore, East Indies, in his Inquiry into the statistics and Pathology of some points connected with abscess of the Liver, thus enumerates the symptoms of Hepatic abscess, and discusses their relative importance.

Pain in the right side was present in 153 cases out of 173, in 51 of which it was increased by pressure, and in 23 by a full inspiration.

Pain in right shoulder was present in 48 out of 76 cases. Mr. Waring remarks on this point:

"1. Pain in the right shoulder is most frequent when the right lobe is the seat of abscess; but—

"Abscess may exist in the right lobe without this symptom being present in any degree.

"3. Though this symptom is most frequently present when the abscess is situated in the superior or upper portion of the liver, it cannot be regarded as a constant or diagnostic sign.

"4. The pain in the shoulder may be present when the abscess exists on the posterior or concave surface of the liver, or in the left lobe, or when it is deepseated, or when the liver is studded throughout with small abscesses.

"5. The absence of this symptom is no proof that abscess does not exist in the right lobe." (p. 147.)

A reviewer of this work in the Med. Chir. Rev., for July, 1855, does not regard either this or the foregoing symptoms as deserving *per se* of much confidence. *Rigors* was quite a common attendant.

Cold and Clammy Perspirations are regarded as quite diagnostic of this disease, though it is found occasionally present in other diseases.

Jaundice is not of much value as a symptom in this disease, as it occurred only in 9 out of 300 cases.

Vomiting and Nausea were more reliable occurring in 74 out of 84 cases.

Enlargement of the Side, or fullness as a consequent upon en-

serum, and instant relief was afforded. A mixture of 50 grammes of tincture of iodine, with 50 grammes of distilled water, and one gramme of iodide of potash was injected into the pericardium without even being sensibly felt by the patient. It resulted in a cure.

An old Fogy in his Cogitations and Vaticinations, runs full tilt against Probangs, Braces, Supporters, Speculums, and Pessaries, as well as against nostrums and quack medicines. We say amen to his entire tirade against the abuse of the former, and the use of the latter. His Cogitations are in some degree sound and reasonable, and while denouncing in such broad terms eye doctors and ear doctors, lung doctors, and kidney doctors, he should have also added acute doctors and chronic doctors. He says:

"Long time ago, in the dark ages, or even later, the doctor was fortunate if in half a score of years,

"His name full six miles round the country ran."

But now the ambitious aspirant can be known from Maine to California by attending a Medical convention. The price of knowledge and books and fame is very reasonable in our favored age and country."

Dr. Boisliniere, of St. Louis, notices a pustular eruption on the skin from the internal use of Tartar emetic, in pneumonia. He sums up by saying that "Antimony cures pneumonia by producing on the mucous membrane of the lungs a toxic and substitutive action, which is occasionally manifested by a pustular eruption.

too, in strong solution and hot, under oiled silk, he states he has found it an excellent palliative to neuralgic pain. The other uses of the medicine he thus enumerates. In doses of five, ten and fifteen grains, twice and thrice a day, in bitter infusions, it proves alterative, and stimulates the action of the liver in cases where the exhibition of mercurials is undesirable. Externally, in combination with nitre and sulphur in equal proportions, the power being moistened with vinegar, he recommends it in ringworm and impetiginous skin affections; and it is thus, he believes, used by the natives of Lower Bengal. In very strong solutions, applied hot, he recommends its use as a topical anodyne in various painful affections.—*Med. Chir. Rev.*

Treatment of Laryngitis by the Insufflation of Powdered Nitrate of Silver. By M. EBERT.—M. Ebert observes that every surgeon who has attempted the application of solutions of nitrate of silver to the larynx must be convinced of its difficulty, if not impossibility. Indeed, he doubts whether the fluid ever reaches that organ at all; and in two cases of croup, in which the attempt was made by a most expert surgeon, he found after death that not a trace had penetrated into the larynx itself. In repeated attempts in the dead body he has constantly failed to introduce a sponge mounted upon a whalebone, and only after manœuvring could he get a silver catheter to enter. How much more difficult must it be, then, during life, when the very attempt stimulates all the neighboring muscles to resistance.

On the other hand nitrate of silver, in powder, may be introduced by the simplest agency. We all know how easily pulverulent substance, drawn in unawares by a deep inspiration, enter the larynx, and give rise to irritating cough. Trousseau was the first to apply this fact to the treatment of laryngeal affections by nitrate of silver; and Professor Burow, of Konigsberg, speaks very highly of this mode. He mixed three grains of arg. nitr., with one drachm of saccharum lactis, and caused the patient to insufflate daily as much as would lie in the barrel of a steel pen. Chronic laryngitis, which had gone on the production of complete aphonia, was thus cured in a few weeks. Since he saw this account M. Ebert has used the same mixture with surprising success in several cases of laryngitis. So minutely does the sugar of milk divide the nitrate, that if even a small portion of the powder only reach the larynx, it will still contain its proportion of the nitrate. He administers it in the following way. A steel pen, charged with as much powder as it will hold, is attached to

one end of the barrel of a quill, which is also open at the other end. This is introduced far enough into the mouth to bring the steel pen opposite the root of the tongue. The lips are now closed around the quill, and the nostrils compressed, while the patient is desired to draw in air rapidly and forcibly through the quill-barrel. Almost every one fails at first, but all succeeded on the second or third attempt—the cough and irritation of the laryux announcing the penetration of the powder there. Even delicate females and children easily practice the insufflation, and will repeat it for days or weeks together. Young children may have it administered by an apparatus, contrived by Professor Burow. M. Erbert has as yet only employed the remedy in laryngitis, and he briefly relates six cases of its successful application. —*Annalen des Charité Krankenhauses*, Band v. p. 89.—*Med. Chir. Rev., July*, 1855.

DISLOCATION OF FEMUR REDUCED BY MANIPULATION.

In the January No. of the *N. Y. Journal of Medicine*, Dr. Fountain reports three cases of this new mode of reduction of dislocations of femur. In dislocation of the left femur upon the *dorsum ilii*, placing the patient prostrate upon a matrass, he "grasped the knee with the right hand and the foot with the left, flexed the leg on the thigh, and carried the thigh and knee over and upon the sound one, and then upwards as high as the umbilicus, keeping it constantly pressed down upon the body. I then carried the knee outward, bringing the heel inward, and the foot over the opposite limb, at same time making gentle oscillations of the thigh, when the head of the bone slipped into its socket." Time occupied, *ten seconds*. In this manipulation the knee was made to describe a "*semi-circular sweep*" over the sound limb and across the body, the thigh being held up firmly and steadily at right angles with the body.

In dislocation *on the pubes*, he thus describes the operation:

"Taking the knee in one hand, and the foot in the other, rotate the whole limb outwards, and flex the leg on the thigh by carrying the foot over the opposite knee. Then carry the limb, foot forwards, over the opposite thigh, at the same time twisting the heel upwards, and pressing the knee down. Carry the thigh in this way over the sound one as high as the upper part of its middle third, then elevate the limb by raising the knee while

the foot is held firm at the same time making gentle oscillations when the head of the bone will slip suddenly into its socket."

Mathysen's Gypsum Bandage.—At Charité Hospital, Berlin, this new bandage was employed in thirty-six cases of fractures. It is prepared by stretching a roller of linen or flannel upon a table, and rubbing powdered gypsum into it on each side. It is then rolled up for use. Before applying, it is dipped in water or other fluid, and where it is not sufficiently wetted, it is moistened, as it is applied, with a wet sponge. To render it firm and immovable, it is only necessary to apply a thin paste during the last turns of the bandage. It may be as readily removed, by previously moistening it. For the following reasons it is said to be the best of all hitherto invented:

1. The rapidity with which it hardens. 2. Its simplicity and easy application. 3. Its small cost. 4. The ease with which it may be removed—the linen composing it being available, after twenty-four hours' soaking, for new bandages. 5. Its firmness and immovability render it suitable for the most oblique and difficult fractures. 6. From its rapid hardening and its firmness, it is well adapted for those cases which require extension and counter-extension to produce coaption of the fractured parts. The position obtained remaining unchanged, apparatus of extension, so uncertain in operation, and so annoying to the patient, is not required. 7. The ease with which it is borne. 8. Its porosity. Cutaneous transpiration is not quite suppressed, and if the fracture be complicated by wounds, ulcers, &c., these are indicated by the discharges making their way through the bandage. 9. The gypsum bandage is a good conductor of heat, and a bladder of ice placed over some oil-skin, around the fractured part, takes effect in five minutes. 10. When the bandage is properly applied, the form of the limb is so well displayed, that any irregularity of the fractured part may be judged of externally. 11. Its handsome appearance and regularity distinguish it from all analogous bandages. 12. Fractures seem to unite sooner under its employment.—*Annal. des Charité-Kraukenhauses*, Band v. p. 157.

Sunday Dinners.—We are not quite sure but that the *Presbyterians* are, after all, nearer right, all things considered, than any other denomination of Christians. There is a vein of sturdy propriety, of sterling philosophy, running through their com-

monest customs, well worthy of a note—we speak more particularly of the bona fide, the real, identical, original, old-fashioned sort of *Pris-by-churns*, as it is pronounced, away off yonder in the woods of the West, where we sprouted and came up, and where we have been upping ever since, until *Medical Inhalation* came along, took the wind out of our sails, cured up all the consumptives, and left us nothing to do but to stand with gaping mouth and open eyes, wondering where we will *fetch up*, cogitating *whereunto these things will grow*—alternating with the more agreeable pastime, of rolling over the floor with our little ALICE, who grows sweeter every day, as with the weight of a baker's dozen of months on her head, she is taking her first lesson in pedestrination—read carefully, it is not predestination we are talking about, although speaking of *Presbyterians*, we are next door to it. Can a heart be ever more full of pure delight, than when looking at one's own childs's desperate first efforts at walking; how it hesitates, half moves a foot, then hesitates again; then catching a glance from its mother's eyes and beckoning finger, it summons up all its resolution, and with open mouth and upraised hands, makes the desperate plunge, and with half a step, throws itself forward in its mother's arms, never doubting that she would let it fall; by degrees, a step or two more are taken, until at length the wonderful feat is performed, of toddling clear across the room, and you read the triumph in its eyes, as legibly as if a conqueror had won a world.

As we were saying, *Sunday Dinners!*—that is, a "Presbyterian Dinner," as it is denominated on the other side of the *Alleghanies*, is most philosophical; it is a *cold* dinner, and its philosophy consists:

1st. In its piety.

2d. In its humanity.

3d. In its prophylactiveness.

Its *piety* is evident, from its allowing more time for that religious reflection, which becomes the Sabbath day; and which, being *cumbered with much serving*, as effectually prevents, as it did in Martha's time.

That it is *humane* to have as little cooking done on Sunday, and thus giving as much *rest* to our servants as practicable, no one will deny.

As to the *healthfulness* of a cold dinner on Sundays, a moment's reflection will be conclusive.

As we take very much less exercise on the Sabbath day than when engaged in our ordinary avocations, we need that much less food. No one can eat as much of a cold dinner as he would

if it were smoking hot. There is no danger of our not eating enough dinner on Sunday, let it be ever so cold and uninviting; for if any business man would take nothing at all for his Sunday dinner, and for the following supper were to drink a single cup of any kind of tea, weak and hot, and eat with it a bit of toast or a piece of cold bread and butter, he would be all the better for it in mind and body the next day; and would go to his business on a Monday morning, with a vigor and an elasticity which that man never knows who makes his Sunday dinner *the* dinner of the week.

Taking so much less exercise on Sundays than on a week-day, and stimulated to eat more on that day by its superior excellency, aided by idleness, there is of necessity a repletion, an over supply of food, which will be as certainly disastrous, as the feeding of a locomotive with more fuel, while she is standing still, than when she is going ahead, with her long retinue of passengers and freight.

But in a sober, religious point of view, those inviting Sunday dinners are not judicious; the nervous energy is drawn to the stomach in extreme quantities, in order to dispose of the overload, leaving the brain scantily supplied, causing dullness, drowsiness, and almost stupidity, wholly unfitting the mind for proper attention to the religious exercises of the afternoon, the palpable cause of wasted sermons, of wasted opportunities. This subject is worth a serious thought on the part of pious people, especially those who have a growing family. Cold bread and meat, with pie or baked apples, and a single cup of good hot tea or coffee make a good enough Sunday dinner for anybody.—*Hall's New York Journal of Health.*

Lead Colic Treated and Cured by Chloroform.—M. Aran has used Chloroform, with great success upon six cases of lead poisoning. From the administration of the first dose a decided improvement was perceived, which, in a few days, would completely restore the patient. The mode of administering Chloroform differs from that generally adopted. To obtain its full effect he administers it internally, in doses of 30 g$^{tts.}$ Also in enemata, and as an external application upon the abdomen. The bowels are soon moved by this treatment, and the symptoms disappear. —*Gazette des Hôspitaux, March 27th*, 1855.

Treatment of Diabetes by Eau de Vichy.—In from twenty to fifty hours cases of Diabetes were very much improved or entirely cured by the use of this water. In many cases the general

improvement was very great, in others, though the sugar in the urine disappeared, the amelioration was not permanent, particularly in cases where the febrile accidents were well marked.—*Ibid.*

Treatment of Pertussis by the Sulphate of Quinine.—In the 29th vol. of the *Journal de Mèdicine et de Chirugie Practiques*, the use of Quinine is strongly recommended in this disease by Dr. Lecadre, (of Havre.) In the incipient stage there is almost always present some bronchitis, for which the Doctor uses emetics and emollients, together with revulsives to the extremities.—In the spasmodic stage, the Quinine is given, in powder, the dose varying from 2 to 6 décigrammes, according to the age of the child. It should be given immediately after a paroxysm.

When the medicine is persevered in, it is rare not to observe some sensible modification in the coughs: they are shorter, and consequently more supportable; after three or four days there is marked improvement, and though the disease may not have completely disappeared, the paroxysms are of short duration and occur at long intervals.

Dr. Lecadre has employed all the known remedies used in Pertussis: such as belladona, assafœtida, sulph. of potass., cochineal, *etc.*, (some of these in conjunction with Quinine,) but in none of them has he found as much benefit as in the quinine alone.

Sugar and Salt as a Local Solvent in Chronic Congestions of the Cervix Uteri.—Dr. F. J. Brumstead, in a communication to the Editors of the New York Medical Times, writes as follows:

The following novel method of reducing the congested state of the cervix uteri, which is so commonly met in the chronic affections of this organ, accompanied by discharge from the os and "ulceration" of its mucous surface, has been so successful in my hands, and in the practice of several gentlemen to whom I suggested its use, that I desire to make it more generally known through the pages of your journal. The plan of the treatment of which I speak, originated, I believe, with Mr. Caudmont, of the *Ecole Pratique*, Paris; at any rate, whether original or not with him, it first came to my knowledge, four years ago, from his practice at his private clinique, and I have been unable to trace it to another source.

The following is the method of its application: The os uteri having been exposed by means of the speculum, equal parts of sugar and common table-salt, finely pulverized and mixed, are impacted around the vaginal portion of the cervix uteri, and re-

tained in place by a pledget of lint or cotton wadding, moulded into the form of a *godet*, or small cup, and having a string attached to its convex surface to facilitate its subsequent extraction. Thus applied, it is left *in situ*, and the patient is directed to withdraw the plug, by means of the string attached, in the course of twelve to twenty-four hours.

Its effects are to produce a very copious discharge from the parts to which it is applied; so much so, indeed, that the patients should be cautioned to take means for the protection of their linen; and at the following examination the cervix is found to be greatly relieved of its swollen state due to the products of congestion, and much reduced in size.

The most obvious explanation of the action of this application would appear to be found in the principle of exosmosis. Its advantages over the use of leeches or potassa fusa to accomplish the same purpose, are obvious. It is exceedingly simple and speedy in its action; it is attended with no danger of injury to the neighboring parts, or of hemorrhage; it attains the end with but little pain or inconvenience to the patient. Moreover, the experience of several gentlemen, enjoying a large field for observation in the treatment of uterine diseases, whom I induced to make a trial of Caudmont's method, confirms the result of my own practice, viz: that it is even more efficacious as a solvent than the ordinary applications in chronic congestion of the cervix uteri.

Observations on the Root of the Cotton Plant, By THOMAS J. SHAW, M.D., of Robertson county, Tenn.

Chemical Examination of the Root.—The result of which, as accurately as might be determined, is as follows:

Gum, albumen, sugar, starch, tannic acid, gallic ascid, chlorophyle, iodine, caoutche, black resin, red extractive matter, black and white oleaginous-like matter. The latter two abound in this plant.

Proximate Principle.—Experiments were made with the view to the isolation of the active principle of the root, which were not altogether satisfactory; for though there was no crystalline principle obtained, as was desired, making the existence of it palpable and distinct to all; still there is evidence in favor of a principle existing in it. Time did not permit of an extended experiment in this department of the analysis. The author indulges a hope of having time to examine the active principle more minutely than he has yet done. What he has seen suffices to convince him that the medical properties attributed to it are not fallacious.

The attention of the medical profession was called to the prop-

erties of this root, first by Drs. McGown and Bonchell, of Mississippi; the latter gentleman, by an article written in the Western Journal of Medicine and Surgery, about the year 1842, as well as I recollect. For a want of confirmation, it passed unnoticed by the profession, until the year 1852, when it was again brought into notice in an article written by Dr. John Travis, of Marlborough, Tennessee, in the Nashville Journal of Medicine and Surgery. He reported but one case in which he tried it, and it was with entire success, restoring the menstrual flow in a short time, after an absence of about ten months.

I consider this root one of the best emmenagogues of the materia medica, and I think it should be so classed. My reasons for considering it such are grounded upon the different experiments which I have made with it, within the last twelve months. I sometimes use a decoction, and at others an infusion, but most generally a decoction, prepared thus:

℞. Cotton Root, ℥iv.
Water, lbs.ij.

Boil down to one pint. S.—A wine glass full every hour. This produces the most salutary effect in dysmennorrhœa; it acts as an anodyne in allaying the pain, and as an emmenagogue in aiding or augmenting menstruation; its action is very speedy; after its exhibition, in this case it produces an effect which, indeed, appear almost natural, that is, almost without pain; the patient, after its exhibition, feels but little inconvenience from pain, which soon subsides, and menstruation is immediately augmented, without acceleration of the pulse or gastric uneasiness.

Its action in amennorrhœas I think superior to any other emmenagogue belonging to the materia medica, though it would be proper to pay some attention to the general health of the patient before its exhibition. It is superior to anything that I have tried in the way of emmenagogues. I have had cases in which I first tried the usual emmenagogues, with but little effect, (for success,) when I would determine on trying the decoction of this root, which would far surpass my expectations by acting with the most marked effect; menstruation being produced on the following day after its exhibition. All of the symptoms disappeared on exhibition of this medicine. I believe this to be the best emmenagogue that we can employ in mere suppressio mensium, where there is no other disturbance in the general health.

With the usual emmenagogues, I was enabled to produce the catamenia on a young lady, which continued for about twenty-four hours, then suddenly becoming very sparce and painful; and in a few days after the period had passed, I employed the infu-

sion of the Cotton Root as a means of exciting this function, which it did on the following day, a plentiful discharge being produced, which continued for five or six days. She has been regular at every period since that time, and has enjoyed good health, with the exception of a few simple attacks, which caused no derangement of the menstrual function. For about twelve months previous to the exhibition of this medicine, her health was very much impaired, but she commenced improving, and soon recovered her health. I could detail other cases similar, in which I have tried the decoction with the same effect, but I deem it unnecessary to mention its action in each individual case.

As a parturient agent, I think it superior to ergotin one sense of the word, and in another about its equal, it being about as prompt as that of ergot, and attended with much less danger. I have tried both in parturition, and found the Cotton Root decoction to act with fully as much efficacy as ergot. In some cases in which I have tried it, the pain was to some extent allayed, and labor promoted with as much speed as when ergot was administered. It appears to be perfectly harmless, from the fact that its action is almost unattended with pain. It causes neither gastric distress, nor acceleration of the pulse; if it does, it is not perceptible; both of which are occasioned by ergot, to some extent.

I have witnessed its action in retained placenta with good effect, which was an expulsion of the mass in about twenty minutrs after the exhibition of the first dose. It may be proper to say, that I gave two doses before the placenta was thrown off. I believe it to be safer as a parturient agent, or an emmenagogue, or at least as safe, as any other article of the materia medica.

It should have a fair and impartial trial by the profession generally, because it will prove itself worthy of the time and labor spent in its investigation. It is handy to all, and free of expense. A few trials by the profession will confirm the truth of this short essay. Give it a trial, and it will prove itself in some case of amennorrhœa, dysmennorrhœa, or probably in some lingering case of labor, which may require the assistance of medicine, to produce contraction of the uterus for the expulsion of the child. I think it worthy of the attention of the profession, in the above cases.

Tincture of the Cotton Root as a Tonic.—There is a condition of the system in which this tincture acts as a valuable restorative. These cases are of a luco-phlegmatic temperment of both sexes, but it is to the female sex that I wish to draw the attention of the reader. Where there is general bad health, accompanied with tardy menstruation, I have used it with the happiest effect; in a

few cases of emansio mensium, caused by anæmia. where the patient was troubled with pains in the loins and giddiness of the head, with a derangement of the digestive organs, such as anorexia, accompanied with an uneasy, depressed feeling at the scrobiculus cordis, every month, which was promptly relieved by the tincture, but not with the effect of producing the menstrual flux, which was afterwards produced by the decoction, I find it necessary to continue the tincture from two to four weeks. The strength of the tincture that I have been in the habit of using, is prepared thus:

R.	Bark of the Root, (dry,)	℥viij.
	Diluted Alcohol,	lb.ij.

Digest fourteen days, then filter and give it in ℥j. doses, three or four times a day. The tincture which I used was prepared by myself; and as I have seen no account of its use, I claim the first preparation of it, as well as the first experiment with it. My brother, Dr. H. J. Shaw, has since tried it, with the same good effect; in fact, his experience coincides with mine throughout. In closing this short and imperfect essay, I indulge the hope that it will prove of some service to the profession.—*Nashville Journal of Medicine and Surgery, Jaly*, 1855.

Tincture of Iodine: advantages of its employment in Photophobia.—M. Van Holsbeck, in the *Journal de Mèdicine de Brazelles*, publishes such cases of relief from its use that the remedy must become very rapidly general. In the photophobia which accompanies scrofulous ophthalmia, it is peculiarly eficacious. It is applied thus: With a little brush dipped in the Tinct. of Iodine we paint the articular region and the eyebrows of the eye affected with photophobia. This operation is practiced once or twice during the twenty-four hours, according to the intensity and persistence of the symptoms. One application sometimes suffices to relieve it in twenty-four hours; and the author says in cases of inveterate opthalmias, which had resisted all other appliances, the effects of the tincture are immediate; some hours after its application the pains diminish, the spasmodic contractions of the pupils loose their violence, tears flow in less quantity, and some time after the patient can open his eyes to the light, and submits them to the examination of the physician.—*l' Union Medicale.*

Tasteless Infusion of Senna.—Dr. Brandeis recommends a cold infusion of Senna for twelve hours, in a covered vessel, as especially useful in infantile Therapeutics. By this modification

of the process usually employed, the water contains only the cathartic and the coloring matter, leaving the essential oil, the fatty matter, and the irritating resin, which are only soluble in hot water. Senna water thus prepared cold, is almost insipid, and its taste completely disappears when mixed with infusion of coffee or tea.—*Boston Med. and Surg. Journal, from Archieves Generales de Med. for April.*

Burns.—In burns of the first degree, M. Stanislas Martin strongly recommends (*Bull de Therap.*, Oct., 1854,) that the injured parts should be covered with the white of egg. By painting over the burn with several layers of albumen, a varnish is formed, impermeable to the air, and possessing the advantages of collodion without its irritating properties.—*Boston Med. Journal.*

A New Mode of Producing Abortion. By Prof. SCANZONI.—The means proposed by the Professor of Wurzbourg rest on the intimate sympathy which exists between the mammary glands and the genital organs, particularly the uterus. It is known that lactation often determines uterine pains and hemmorrhage, and that pregnant women who have continued to nurse have aborted; the author thought, therefore, that an excitation of the nerves of the mammæ would produce uterine contractions. His expectations are completely realized in the following case:

A pregnant woman, 23 yeaas of age, entered the obstetric clinic of Wurzbourg, having a contraction of the pelvis, which necessitated perforation of the head and cephalotripsy. This operation was followed by a slight metritis, which was easily cured. The woman was requested, in case of a second pregnancy, to present herself early at the clinic, so that means could be taken to avoid an always serious operation.

This woman, becoming again enciente, followed the advice given her; and it was decided to attempt premature labor by exciting the mammary glands. To do this, the author procured two suction apparatus composed of a gum elastic bladder furnished with a funnel-shaped glass tube; the air being expelled by compressing the bladder, the apparatus acts like a cupping-glass.—On the 25th of February, towards the thirty-second week of the pregnancy, the instrument was applied during two hours of the morning, and the same time in the evening.

On the 26th and the 27th the apparatus was applied three times a day. After the third application, a shortening of the vaginal portion of the uterus and a slight dilation of the orifice

was observed, the woman feeling no pain. The pains commenced on the 27th, after the sixth application, and increased at night; the neck of the uterus becoming entirely effaced, and the bags of water commenced projecting. After their rupture, a fœtus was extracted weighing four pounds and a half, (Nuremberg weight,) which gave signs of life by strong cries. The mother recovered promptly, and was able to leave the hospital on the ninth day; the child fell sick the fifth day, and died three days after. This observation is very remarkable, by the extreme facility by which labor is established; and it is to be hoped that the means advised by M. Scanzoni may replace the mechanical precedures employed at present to induce abortion. M. Scanzoni relates at the end of his work the history of a second accouchment, produced in the same way, towards the close of the seventh month, and with the same success. The application of cupping glasses on the breast during labor seemed to hasten it perceptibly.—*Revue Medico Chir. de Paris, from the Gazette Medicale.*

Duties of the Practitioner to the Dying. By the Editor of the Medical Times and Gazette.—In our last number we endeavored to show the unpleasant impression made by some members of our profession when they presume to tell patients that their days are numbered, and when patients dare to live on and get well in spite of the prophecy. There can be but few of our renders who are not acquainted with some case or other which has been too hastily condemned in consequence of cavity in lung, or imperfsct valves of heart, or albumen in urine. We speak not merely of gloomy anticipations, which have not been realized—nor as yet merely of suspicions of danger, plainly yet cautiously intimated to the patient or to his family; but we speak of positive, peremptory statements that Mr. A or Mr. B. cannot live six weeks, or whatever the term Dr. Rhadamanthus may be pleased to allow. Of course patients so sentenced, give up their faith in the profession, and lend a willing ear to any quack who may promise them relief. Nor is this to be wondered at. It is a serious injury to the profession, but for one which the profession itself is to blame.

But as the whole question involved is a very serious one, and as we write for men whose avocations are daily exposing them to the possibility of error, we make no apology for taking up a few moments of their time in discussing the right principles of action under certain circumstances.

In the first place, we are bound to set before us, in its fullest extent, the idea of LIFE as the most precious of all gifts of the

Creator. It is the gift which includes all others. It is, so far, as we know, the only opportunity which man has of improving his own moral being, or of contributing to the carrying out the designs of the Creator. No life whatever can be set at nought, nor can we venture to call it of no possible service. Life, therefore, is to be upheld, maintained, struggled for, under all circumstances, by the practitioner of medicine; and it is his very first duty to avoid all things which may shorten it, even for an hour.

Equally it is the duty of the patient himself to cling to life with the most unflinching purpose. It is his time of work and improvement; and, till all possible work is done, and all further moral improvement impossible; till the body has reached the term of natural decay; till all the duties of life are accomplished, we hold that to desire death, or not to desire life ardently, and not take every rational means of prolonging it, is an offense against religion and nature. The fear of death and love of life were implanted in our bosoms, like all other instincts, for the wisest purposes.

Here we must bestow a passing word of condemnation upon that prevalent idea of the peculiar sanctity of early death—the detestable and unnatural notion that consumption, for instance, is *la mort des élus*, the fate of those whom the Almighty regards with his most especial favor. All the analogies of heaven and earth cry out against a doctrine so shocking. Work—work, inward and outward: work in subduing his own passions; work in subjugating the earth to the use of man; work in the rearing of a succeeding generation, and in promoting the improvemnnt of the human race; this is the real lot of man, and he is most blessed whose lot is in this respect the richest. But in what we say, do not let us be understood as denying the "sweet uses of adversity." Some there are to whom Providence has denied active work, and yet whose example of suffering patiently the loss of health and of all the enjoymcnts of youth, is felt as a most blessed influence upon all around them. Meekness in suffering is exquisite; but yet the great ends of our being are and must be carried on by the work of the strong and healthy. To resign life without a murmur is good; to employ it actively is better. View it in what aspect you will, it is life which is our most precious possession; resign it we must, without a murmur, when called on; but to despise or throw it away, or not to desire to keep it, is a sacrilege. *Vivens! vivens! ipse confitebitur Tibi* is the soul of the *religio medici*.

Holding life, then, in this most sacred light, we are prepared to lay down the exact motives which should influence the practitioner, when it is in danger, or supposed to be so.

For example, we believe that it is a positive duty, never to be neglected, to remind the patient, or those about him, (if a reminder is necessary,) of the expediency of availing himself to the utmost of the consolations and offences of religion. But this should not be done merely because the patient is likely to die, but simply because, being ill, he cannot seek the offices of religion in public; because he has time to attend to them, and requires the comfort they afford; and more especially because they afford the means of living on—if life be spared—more usefully and happily. We repeat, that religious offices should never be degraded into mere nostrums for the dying; the clergyman coming when the physician gives up the case; as the ancients put money into the mouths of the dead to propitate the ferryman of Hades; but they should be resorted to as means of better life—as the daily bread of the living, and not merely as the viaticum of the departing.

So let us imagine the case of a person ill, or hopelessly ill. It is the duty of the physician still to adopt every means for his benefit. But is he to inform the patient in every case that there is little or no hope?

We can conceive that such a course is justifiable if the patient willfully and recklessly neglect to settle his worldly affairs, or persists in a course of profligacy and wickedness. Scarcely otherwise

"Gravi me terrore pulsas, vitæ dies ultima."

So said a poet, with whom our readers ought to be acquainted, and so says human nature. To tell a man that he must be cut off, inflicts a pang sharper than that of the knife, and it should not be done unless some great end is to be attained. We are not meaning to imply that the physician is to conceal *danger* from the patient's friends, or to state anything positively untrue; but we do say, that his paramount duty of preserving life to the utmost may render it imperative on him not always to tell the whole truth to the patient, if, by so doing, he lessens by one jot or tittle the chances of his recovery. For our own part, we should always desire to know if our own life were in jeopardy, and should feel bound to give the same information to any patient who desired it, and was able to view the matter in its proper light. But there are many to whom such an announcement would be dangerons and unjustifiable.

A Report on the Diet of the Sick. Read before the American Medical Association, by CHARLES HOOKER, M.D.—Prelimi-

nary to the special subject of this Report will be briefly noticed the physiology of nutrition, and some general principles for the regulation of the diet in health, together with common errors of diet as causes of disease.

Little reference will be made to authors, the object being to give the results of the writer's personal experience and observation, rather than to compile a complete and full treatise on diet.

The Physiology of Nutrition.—Nutrition is that function by which the plastic elements of the blood are converted into the different tissues of the body, so as to become parts of the living organic system. In this strict sense, nutrition and assimilation are terms of similar import. In a wider sense, nutrition includes all that series of functions by which the food is reeeived into the body, and prepared for the process of assimilation, and also, those functions by which the refuse materials of the food, and of the organic tissues are eliminated from the body. This series includes the prehension of food, mastication, insalivation, deglutition, chymification, and chilification—functions constituting the general function of digestion: and, also, absorption, respiration, and assimilation, and the cutaneous and urinary secretions.

These various processes are carried on by an assemblage of organs, together termed the nutritive apparatus, and constituting a most complicated animate machine. These organs are all connected by a reciprocal relation of action, and, as in any artificial machine, derangement of a single spring, wheel or cog, disorders the action of all the parts, so in this animate machine, failure in any one organ disorders the whole function of nutrition. Thus, for instance, in the primary stage of digestive action, the salivary secretion depends much upon the motions of mastication, and the presence of food in the mouth. Imperfect mastication, therefore, causes imperfect insalivation, and thus the stomach is unduly taxed to comminute and dissolve the food, the balance of the nutritive apparatus is disturbed, and the whole function of nutrition becomes disordered. So if the cutaneous or urinary secretion is suspended or disordered, a reflex influence is soon felt in the digestive organs, with a general derangement of health.

General Principles and Common Errors of Diet.—From this reciprocal relation of the organs composing the nutritive apparatus, is inferred an important general principle for the regulation of the diet, that *each and all of the organs of nutrition should perform their appropriate office in disposing of the food.* From this general principle several rules may be deduced.

1. *In eating, suficient time should be allowed for perfect mastication and insalivation.*—The neglect of this rule is the cause

of much disease. Business men, in the hurry of engagements, give little thought to the mischiefs of fast eating. Our public tables present a scene of apparent strife to excel in dispatch of a meal. It is a great drawback to the comfort and sanitary benefit of traveling by public conveyances, that passengers are compelled, by short stops, to bolt their food. Even in most private families, the short time allowed for meals is incompatible with healthy digestion; indeed, so common is this error in this country, that it may be considered as a national sin. Loss of teeth is by many persons made an excuse for imperfect mastication; it is, however, no excuse for hurried eating, for if mastication cannot be well performed, there is the more need that the food should be retained in the mouth until thoroughly insalivated.

2. *Solid food should constitute the greater proportion of the diet.*—It is a common mistake to suppose that liquid food is more easily digested than solids. Dyspeptics learn that their weak stomachs bear solid meat and bread better than broths and gruel. This fact, with many others, shows the importance of the salivary secretion, and consequently the utility of mastication in promoting this secretion; and, in most diseases, if there is sufficient strength for the motions of mastication, solid food, requiring the primary organs of digestion to perform their appropriate part of the general function, is commonly to be preferred.

3. *An excessive quantity of drink is to be avoided.*—Tea, coffee, and other drinks are often used in eating to wash down the food, whereas the food should be retained in the mouth until the admixture of saliva is sufficient for its deglutition. Many dyspeptics advantageously adopt the habit of not drinking until the completion of a meal, thus securing a copious secretion of saliva.

But imperfect insalivation is not the only injurious consequence of an excessive use of drinks. Chymification, also, is imperfectly performed when an undue proportion of drinks takes the place of the natural solvents, the saliva and gastric juice, the nutrient properties of the food become weakened by excessive dilution, and the general function of nutrition is consequently impaired.

Physicians who have not turned their attention particularly to this subject, in their investigation of diseases, are little aware how often derangement of health is attributable to an excessive use of liquids. Their injurious influence is generally known and acknowledged as one of the principle causes of dyspepsia. Cholera infantum, and other bowel complaints of children, and the various forms of scrofula, both in children and adults, are most commonly preceded and attended by an inordinate thirst, and a habitual excessive use of drinks. A large proportion of the sub-

jects of phthisis have been excessive water drinkers. Dropsy, in many cases at least, is known to be caused chiefly by this injurious habit. In these, and various other diseases, sometimes the most important indication is, to restrict the quantity of drink; and with this restriction, many cases, which present a most serious aspect, will require but little or no medication.

Several cases of *urinary disorder*, which came under my notice about thirty years ago, caused me to suspect that there was often a connection between a long-continued habit of excessive water drinking, and the painful disorders of the urinary organs in old men, popularly associated under the term gravel. Continued observation has assured me of the truth of this suspicion; and in various cases the unheeded warning which I have given to patients in middle age, has been succeeded in advanced life by those distressing and dangerous disorders which I had predicted —pain in the urinary organs, irregular secretion, retention, and, in some cases, diseased prostrate gland.

The reason of this connection is obvious. In middle age, when the secretory functions are active, the skin and kidneys will eliminate an enormous quantity of liquid without obvious injury to the system. Such persons perspire profusely, and not distinguishing between cause and effect, they will argue the necessity of large drinking on account of sweating so much. But the cutaneous secretion is one of those soonest impaired by age; and in advanced life, as the skin becomes inactive and dry, a disproportionate burden of eliminating the superfluous liquids of the system is thrown upon the urinary organs, which, in consequence, often take on a train of disorders rendering old age miserable, and sometimes wearing out life with excruciating protracted suffering.

Purpura Hæmorrhagica is another disease which is in most cases preceded by the habit of excessive water drinking. The remarkable fluidity of the blood, with its deficiency of red globules, indicates its morbid dilution. A general defect of nutrition is manifested by the pale bloated skin, and the languor and lassitude, with the dejected sorrowful countenance, which characterise this disease. This defective nutrition also accounts for the lax condition of the vessels, which allows the blood to permeate their coats, producing petechiæ and ecchymosed spots in the skin, and causing hemorrhage from various parts of the body.

In May, 1839, I was called to visit a young man, hostler in the stable of a hotel, who was attacked in the evening with epistaxis. Notwithstanding ordinary remedies, the hemorrhage continued until morning, when the whole surface of the body was found

speckled with minute petechiæ, intermingled with a few ecchymoses, three or four lines in diameter. New extravasations continued to appear in the tissues of the skin, until a shilling piece could not be applied to any part of the surface without covering several petechiæ or ecchymosed spots. The bleeding continued from the nose, and successively appeared from the gums, the stomach, and intestines, and from several abraded spots on the skin, until the patient died, about two weeks from the commencement of the hemorrhage. This patient had been an enormous water drinker, resorting to the pump, while employed in the stable, at least once or twice every hour, and drinking largely each time.

In February, 1852, a delicate married woman, eighteen years of age, recently from Massachusetts, and now within about two weeks of her expected confinement, sent for me, supposing herself to be in labor. She had been bleeding from the nose almost constantly for seven days; the pulse was now 130, and extremely feeble, the skin was cold and blanched, and three or four large ecchymosed spots were found on the limbs. The pains, which she had mistaken for those of labor, were the rheumatic-like pains commonly attending purpura, and affected chiefly the limbs, which were very sore and painful on motion. She sank rapidly, without the occurrence of parturition, and died short of two days from the time I first saw her—having bled profusely, not only from the nose, but also from the mouth, lungs, stomach and bowels. The blood effused during the last few hours of life was scarcely colored, but appeared almost like pure water. From early childhood she had been remarkable for the habit of using water inordinately; and during her pregnancy she continued to drink frequently and largely during the day, and regularly took a large pitcher of water to her bedside at night.

Two woman attended by me, and several others under the care of medical friends, I have known to die with purpura immediately or within a few days after parturition. All of them had this habit of excessive drinking during pregnancy, and most of them from childhood.

The cases of purpura which I have seen in very young infants, have always been traceable to an inordinate use of drinks by the mother. Two infants I have seen, who died with hemorrhage from the umbilicus, in one of them the bleeding not commencing until three days after the separation of the cord. In one of them, ecchymoses appeared on various parts of the body and limbs; in the other, only in the interior of the mouth. There was no hereditary predisposition to purpura in these cases, but both moth-

ers had an inordinate thirst, which they freely indulged during pregnancy.

In April, 1852, I was called to visit an infant eight months old, affected for the last two days with discharges of blood from the bowels. The child was plump, and might have appeared to a superficial observer in fine health. Its skin, however, was blanched, and the countenance had the characteristic sorrowful expression of purpura. Within two days, the whole surface—head, trunk, and extremities—became thickly speckled with minute petechiæ, besides, in all, forty or fifty larger ecchymosed spots; the dense superficial layers of the integument, as usual, being the seat of the petechiæ, while the extravasations spread broader in the more loose, deeper-seated layers. The whole roof of the mouth was one continuous ecchymosis. The bleeding continued profuse, not only from the bowels, but also from the mouth and stomach. From birth this infant had been very fretful, and had been put to the breast whenever it cried—as often, at least, the mother said, as once an hour, night and day, and commonly every half hour; and the mother drank inordinate quantities of tea, water and other liquids. The milk was secreted profusely, but it appeared, on examination, little different from pure water. The causes of the disease in the child were sufficiently obvious. The child was immediately taken from the breast, and fed on cow's milk, beef-tea thickened with flour, and broths. The medication consisted of acetate of lead and small doses of opium, sulphate of soda and frequent minute doses of elaterium to evacuate the aqueous constituents of the blood, and quinine. Under this treatment the child recovered, and acquired a healthy constitution.

These few cases of purpura are selected from more than thirty occurring under my observation since 1839, which have been connected with the habitual excessive use of drinks. A few other cases I have seen in children, succeeding measles, scarlatina, cholera infantum, and other diseases, which perhaps have not been referable to this cause.

There is also a variety of purpura in which the hemorrhagic habit seems to be not acquired, but congenital. In such persons, the slightest blow or pressure on any part of the surface is immediately succeeded by a deep blue ecchymosis; a slight scratch, or other injury, bleeds freely; and, without any apparent cause, hemorrhages often occur from the nose and other parts of the system; yet they will sometimes live to a considerably advanced age, constantly manifesting through life this hemorrhagic habit. These cases are different from the more common acute form of purpura, and probably are owing to some original lax conforma-

tion of the vascular tissues, more than to the condition of the blood. Nor are they, in all cases at least, attended with the habitual thirst and excessive drinking which I regard as the common cause of acute purpura.

I have not had opportunity to be conversant with another variety of this disease, known as purpura nautica, or sea-scurvy. This is attributed by some pathologists to the long-continued use of salted provisions; and the inquiry may be suggested, whether the use of salt may be indirectly the cause of the disease, by inducing thirst, and a consequent excessive use of drinks.

Habitual excessive drinking, when it does not cause full development of purpura, may be noticed, especially in children, commonly to produce some degree of the pale, bloated skin and other symptoms of the disease. This habit attends most persons subject to epistaxis, many of the subjects of hemorrhoidal discharges, and according to my observation, most women who are troubled with hemorrhage during parturition, when not caused by misplaced placenta or other mechanical cause.

4. *Food should be taken at regular times, and with proper intervals.*—The customs of different people, in regard to times of eating, are extremely various. In some districts of ancient Greece, it was the common-custom to take but one meal during the whole twenty-four hours; while some communities, going to the other extreme, customarily indulge in eating five or six times in a day. This diversity is not a matter of so much importance as at first thought might be supposed. Men are creatures of habit, and they can accustom themselves to great diversity if habit is preserved. A great proportion of mankind, however, have fixed upon the custom of taking three meals a day, which, probably, is the number best adapted to the proper exercise of the nutritive organs and the preservation of health.

The principle should be observed that food should not be taken into the stomach until a sufficient time is allowed for the proper disposal of a former meal. Dr. Beaumont and other observers have shown that the most digestible articles of food require one hour for their complete solution in the stomach; and the time for the solution of different articles of diet varies from one to five or six hours. Such is the process of action in the stomach of a healthy, robust individual. But a very slight derangement of health may interfere with and disturb this process; and it is not uncommon, even in persons who scarcely feel indisposed, for food to remain in the stomach, undissolved, six, eight, and even twelve hours. The stomach, moreover, like all other organs, cannot be constantly employed in action, but must have its proper time to rest after disposing of the food taken at each meal.

From these considerations, it is rationally inferred that eating oftener than once in five or six hours must confuse and derange the digestive action. A neglect of this principle constitutes a very common and most injurious diatetic error.

This error begins often with the first feeding of infants. The young mother, whenever her infant cries, kindly puts it to the breast, and very soon the little sinner learns that, so often as it wants this favor, it only has to cry. The mother who commences in this way is almost sure to have a crying if not a sickly baby; and the accoucheur in attendance on a young mother does not perform his whole duty without giving proper instructions in regard to feeding the child.

The activity of the digestive functions in infancy, and the easy digestibility of the food proper for that age, require the intervals of feeding to be shorter than in latter life; but the principle should be observed, of allowing sufficient time for complete digestion and the proper repose of the stomach. A judicious rule is not to put an infant to the breast oftener than once in two or three hours during the day, nor more than once or twice at night, without nursing. More frequent indulgence creates a habit both annoying to the mother and prejudicial to the infant's health.

This injurious habit is very apt to be encouraged during any temporary illness of infants, when the feelings of the anxious mother can hardly withhold the soothing influence of the breast. This, however, is the very time that frequent feeding is particularly injurious, when the digestive powers are enfeebled by disease; and the duty of the physician often requires him to caution a mother against injuring her sick child by mistaken kindness. There can be no doubt that infantile diseases are often seriously aggravated by this practice of frequent feeding.

Children, after weaning, also, are often injured by irregular feeding; indeed, a large proportion of the diseases of young children are caused or aggravated by this error. If the little thing is fretful, it must be soothed by a piece of cake, or bread and butter. If taken to visit its good grandmother and affectionate aunts, each must perform her kind part in stuffing the dear one with rich cake, pie, or candy. Many of the visits of physicians to young children are rendered necessary in consequence of such mistaken kindness.

Soon after weaning, a child should be restricted to its three meals a day, with perhaps a small allowance of some light food, such as a bit of bread and butter, or a little milk, once between the regular times of eating. Six times in twenty-four hours is

the most that it should be indulged with food—the most that is compatible with a regular appetite and healthy digestive action. The common notion that a feeble child should "eat a little and often," because it eats but little at once, is a most pernicious error. It burdens the weak digestive organs with a frequency of action which in vigorous health they cannot suffer with impunity.

It would be tedious to attempt a notice of all the manifold evils resulting from irregular eating—from a neglect of regular meals, and from frequent eating between meal times.

Physicians, who ought to understand and appreciate the importance of this subject, as a body, do themselves much injury by irregularities of diet. The physician's life is necessarily subject to much irregularity; he cannot always have his regular sleep, and often he cannot conveniently have his regular meals, and he is liable to become habitually careless on this subject. Many, unquestionably, from this neglect, impair their health, and prematurely end their lives; and this constitutes probably one chief reason why the medical profession is shorter lived than the clerical and legal professions. Much of this disadvantage, however, may be avoided, on the part of physicians, by a systematic effort to be at home at regular meals, and by a habitual practice of making themselves at home everywhere and anywhere, when overtaken by regular times for eating.

The arrangements of our public conveyances not only subject travellers to the evils of hurried eating, already mentioned, but in many instances provide no convenience for regular meals; indeed, on some of our railroad routes, but for the mercy of the cake and fruit boys, starvation would be almost inevitable. This is a matter which is of vast injury to the comfort and health of the travelling public, and needs reform.

The evils of this error are very common in families of the sick. The necessary attention to the sick—the anxiety and watching, continued night and day—often cause regular meals, with other domestic concerns, to be neglected. This irregularity occurs, too, at a time when the family most need the support and invigoration of their customary refreshment; and it is doubtless a main reason why a disease which has attacked one person so often prostrates successively other members of the family. Physicians should feel it their duty earnestly to caution families against this dangerous error.

5. *The diet should consist of a variety of food.*—The several organs composing the digestive apparatus have various adaptations in relation to different kinds of food. Lean meat, for instance, and other nitrogenized substances remain in the stomach

until completely dissolved; while oily food passes undissolved out of the stomach, to be acted on by the secretions in the small intestine—the special office of the pancreas, according to the views of recent physiologists. A proper mixture or variation of diet is therefore necessary to excite the appropriate action of the several parts, and maintain an equilibrium of action in the whole machine.

Large observation of the dietetic habits of men, in different countries and ages, no less than the conformation of the digestive organs, would seem to prove that man was designed to be omniverous.

But it is earnestly contended that the common use of flesh for food is a mischievous error: and names of men are cited, celebrated for high physical and intellectual attainments, who are said to have lived mostly or wholly on vegetable food. Some of these individuals are known to have used largely of milk, eggs, or other light kinds of animal food. And the possibility must be admitted, of rare cases of high physical and mental development, notwithstanding a restricted diet. When, however, observation is extended from individuals to nations, national imbecility is invariably found connected with an exclusive vegetable diet. The common diet of Ireland may be regarded as a chief reason for the frequent abortive efforts of that people to free themselves from the dominion of their beef-eating neighbors; for their capability is manifested by the fact that, under a course of varied animal food, they become most hardy laborers and efficient soldiers. Millions of the rice-eating inhabitants of the East are held in subjection by a handful of British troops. The history of war, also, shows a remarkable correspondence, both in land and naval battles, between the comparative efficiency of forces, in equal numbers, and their diet scale—especially the meat rations.

Even those animals whose digestive organs indicate a strict adaptation to one kind of food, thrive better with a diet somewhat varied. The delicate canary bird, with its simple graniverous conformation, not only requires a change of seeds, but also an occasional supply of fresh herbs, and even a little yelk of egg or other animal food. The vigor and endurance of the horse are much increased by frequent changes of the various kinds of grain and other food with his staple, hay; and the usefulness of the animal, no less than economy of feeding, requires these variations. Certainly, therefore, the human digestive organs, with their obvious comparatively greater adaptations, clearly indicate that nature designed man for a wide range of diet.

A mistaken opinion has, to some extent, prevailed, that a simple vegetable diet favors mental cultivation. Scholars sometimes claim that, under such a diet, the head is clearer, and they can study better. Many a man of brilliant early promise has persevered in this delusive course until, with a failure of physical constitution, mind and body have been together wrecked. Hypochondria, and other forms of insanity, are often attributable to this error of restricted diet. The mind implanted on an ill-fed physical constitution is almost sure to have a stinted and distorted growth. The strict dieter will sometimes excel in some particular department of learning—he will spin out a single train of thought, with nicety and no little ingenuity—but he is commonly a one-idea man. Hence, most visionary theorists, and enthusiastic ultraists—the originators and devotees of the various "isms" and "ologies" that disturb the good common sense of mankind—generally have their restricted notions of dietetic regimen.

As a general rule, a generous diet is indespensible to vigorous mental culture—to richness and variety of thought, and especially to a rational practical application of knowledge to useful purposes. It would be hard to raise a "universal Yankee nation," or even one genuine Yankee, on a strict vegetable diet.

A fact which gives much support to the opinion that a generous and varied diet favors health and longevity may be noticed, that in every community most persons who live to a very advanced age have been free good livers.

The mischievous consequences of *a sudden restriction of diet* are often observed during the prevalence of epidemic diseases. In towns where cholera has prevailed, popular opinion has commonly attributed the disease to improper diet. The report of fatal cases is not thought eomplete without a mention of the food taken by patients immediately before their attack. Newspapers and boards of healh have proclaimed the frightful dangers of a well-furnished table; municipal authorities have prohibited the common sale of vegetables, and ordinary articles of food have been utterly prescribed. Families have thus been driven to a radical change in their habits of living, fearfully selecting from their scanty bill of fare, as choosing between dangers, and watching the sensations of the stomach for the signs of outbreaking disease.

Such panic and sudden changes to an almost starving diet would, any year, cause sickness. the specific character of which would be subject to prevailing epidemic influences. There can be no doubt that these causes greatly increase the number and fatal-

ity of cases during the epidemic prevalence of cholera, dysentery, and other diseases. In the epidemic dysentery which prevailed in New Haven, in 1849, it was observed that a very large proportion of the fatal cases were in persons who, early in the season, adopted a restricted diet. Any great change in habits of living is dangerous during the prevalence of fatal epidemics; even bad habits, as that of intemperance, should be cautiously abandoned at such a time.

It is a doctrine often taught, as a leading principle in the choice of food, that *the appetite is the natural and proper guide.* This principle is true, provided there is a natural, healthy appetite; but if the appetite fastidiously refuse common articles of food, and narrowly restricts its choice, it indicates a want of proper tone in the digestive organs. It is then a sickly appetite, and is not a proper guide. The true principle here is to regard man as an omniverous animal, and to discipline the organ to the use of all common kinds of food.

Many children have this fastidious appetite; in some depending on original constitutional weakness, and affecting whole families, particularly those in which scrofula is hereditary; in others, acquired by errors of diet, such as we have already noticed. This fastidious sickly appetite is the legitimate result of frequent and irregular feeding—pampering with pastry and confectionary—and of indulgence in a frequent and large use of cold water, and other drinks. This fastidiousness, whether originally constitutional or acquired, is sure to continue so long as the errors are indulged. In such cases, alterative and tonic medicines are important aids, but the chief dependence is on a regulated diet.

In the physical education of children and young persons, it should be a principle to discipline the digestive organs to a tolerance of all common kinds of food. Though cases may occur of peculiar idiosyncrasy, in which an aversion to particular articles of diet is obstinate, and even insuperable, such cases are uncommon; and this aversion should generally be considered as indicating a want of natural healthy tone in the digestive organs.

6. *The diet should consist of both nitrogenized and non-nitrogenized aliment in due proportions.*—Though oily food contributes little, if any, to the organization of the solid tissues of the body, it is indispensably important as a caloric element. In cold climates, where this element is most required, as in Kamschatka, Greenland, and other high northern countries, it properly becomes the staple food. On the contrary, in tropical regions, where the body is subjected to excessive heat, the free use of oily food is dangerous, and often productive of disease. In tempe-

rate climates, between these two extremes, the healthy nutrition of the body requires a judicious combination of the two great classes of aliment—nitrogenized and calorific food.

An insufficient use of oily food is a common and most injurious error of diet. Infants at the breast are sometimes rendered weak and sickly by this error on the part of mothers, the milk, in consequence, becoming deficient of its oily constituent. Many children, also, after weaning, become sick from want of oily nutriment, Deprived of the butter, to which they have been accustomed in the mother's milk, they are fed on cow's milk too much diluted, panada, arrowroot, or some simple farinaceous food. A common consequence of such feeding is a general paleness of the skin and mucous membranes; the lips lose their natural florid hue; the ears are cold, white and translucent; the limbs and whole surface of the body are usually cold, with an occasional transient flush of heat, especially about the head; the bowels alternate between costiveness and diarrhœa, and the child has restless nights, with frequent starting in its sleep. In many cases of this common train of symptoms, the health is soon improved simply by adding a little butter to the ordinary food.

Cholera infantum often originates from this cause, and in the treatment of this disease a due supply of oily nutriment is in many cases of the utmost importance.

At a later period, when more animal food is used, there is often an aversion to fat meat and other oily nutriment; and most parents encourage this aversion, from the common notion that greasy food is injurious to health. This aversion is almost universal in families hereditarily scrofulous; though, as rare exceptions to the general rule, some scrofulous children have a voracious appetite for all kinds of oily food, from eating which inordinately they can hardly be restrained.

With young girls, fashion sometimes deters from eating of fat meat, which is regarded as a sign of grossness and want of delicacy; and many between the ages of thirteen and twenty years, manifest the injurious consequences of this error. The skin is flabby, cool and blanched, and the whole system appears exsanguineous; the cheeks are sometimes flushed with a transient, irritative, feverish heat, but there is a persistent coldness of the hands and feet, and the aggregate heat of the body is uniformly deficient. Menstruation is irregular, painful, scanty, or suppressed. The lymphatic glands of the neck become enlarged. The appetite is irregular and fastidious; especially in the morning food is taken reluctantly, or utterly refused. In short, the general assemblage of symptoms indicate a scrofulous constitu-

tion. In most cases there is a morbid thirst, and the symptoms become aggravated by an excesive use of cold water and other drinks. If, perchance, the friends indulge a fashionable hydropathic monomania, the external use of cold water is brought in requisition, still more to lessen the vital heat, depress the powers of life, and aid the full development of phthisis.

The relation between calorific (non-nitrogenized) food and scrofulous diseases has until recently, attracted little attention from physicians. Some isolated facts have been long noticed, as the exemption of the oil-eating people of northern countries from phthisis, a similar common exemption of butchers, the acknowledged remedial efficacy of cod-liver, and a supposed prophylactic and curative influence of cane-juice and sugar. But the general fact, that the scrofulous diathesis is characterized by a peculiar strong aversion to oily food, has been strangely overlooked.

In May, 1850, a summary of the writer's observations on this subject was communicated to the New Haven County meeting of the Connecticut Medical Society—observations years before made known to the annual classes in the Medical Institution of Yale College. The results in the region of these observations, similar, it is presumed, to what might be observed throughout the country and in other temperate climates, warrant the following conclusions:

1. Of all persons, between the ages of fifteen and twenty-two years, more than one-fifth eat no fat meat.

2. Of persons at the age of forty-five, all excepting less than one in fifty, habitually use fat meat.

3. Of persons who, between the ages of fifteen and twenty-two, avoid fat meat, a few acquire an appetite for it, and live to a good old age, while the great proportion die with phthisis before forty-five.

4. Of persons dying with phthisis, between the ages of fifteen and forty, nine-tenths, at least, have never used fat meat.

Most individuals who avoid fat meat also use little of butter and oily gravies; though many compensate for this want, in part at least, by a free use of those articles, and also milk, eggs, and various saccharine substances. But they constitute an imperfect substitute for fat meat, without which, sooner or later, the body is almost sure to show the effects of deficient calorification.

That these striking facts are commonly unnoticed, the truth of which is rendered evident by observation and inquiry, is conclusive proof that this subject has received little attention. Its importance hardly can be doubted or over-estimated, when it is considered that full one-fifth of the human race is destroyed by

phthisis. To parents, whose children have this aversion to oily food—this fearful sign of early dissolution—the subject is one of deepest interest. It also deserves the careful consideration of life-insurance companies, of young persons in making matrimonial alliances, and certainly of physicians, the professed public guardians of human life and health. The presumption will commonly hold true, that a person who habitually avoids fat meat at the age of twenty-one, will die of phthisis before forty-five.

But the question arises, whether the want of oily nutriment is a common cause of phthisis, or whether the aversion to it is only a concomitant of the scrofulous diathesis. There appears reason to believe that in most cases it bears to the scrofulous diathesis the double relation of effect and cause. That it is an effect, is indicated by the fact that this aversion almost constantly occurs in families hereditarily scrofulous, thus becoming a sign of original constitutional weakness. On the contrary, the indulgence of this aversion deprives the body of its necessary material of vital heat, and thus causes the development of scrofula.

The great practical question, however, is whether oily food exerts a prophylactic and curative influence; whether an acquired appetite for it, and its free use, tend to prevent the development of phthisis, and to arrest its progress. On this point, reference may be made to the exemption of the oil-eating people of northern climates, and, as commonly observed, of butchers; and to the reputed efficacy of cod-liver oil, and other oils used by some physicians as remedies for phthisis, It is the common testimony of physicians that cod-liver oil usually improves the warmth, color, and general nutrition of the body, even in the advanced stages of the disease. Such are its effects after the full development of that disease, the precursory signs of which, in most cases, have been for years becoming manifest. These signs, such as the cold feet and hands, the general paleness, and other symptoms of a scrofulous diathesis, we find associated with the habitual scanty use of oily food. In consideration of these facts, can a reasonable doubt be entertained that the generous use of calorific nutriment must tend to obviate these precursory symptoms, and thus to fortify the body against this common destroyer?

The experience and observations of the writer constrain him to give most positive testimony on this point. In many cases of phthisis in its early stage, and in some cases far advanced, with unequivocal signs of tubercular excavation, the use of oily nutriment has caused a speedy amelioration and ultimate cure. In most cases, it must be admitted, the improvement might be attributed, in part at least, to simultaneous medication; but the oily

diet has been tried in connection with such variety of medication, and other circumstances, as to leave no doubt of its important agency. My patients are plainly told that the habitual use of fat meat is indispensible to encouragement of cure.

It is remarkable that many patients, who have never used fat meat, to whom, indeed, it is absolutely disgusting, will readily take cod-liver oil. My common practice, therefore, is to give the oil regularly three times a day until this aversion is overcome. To patients whose circumstances require strict economy, common sperm oil has often been advised with most satisfactory results. Though I would not positively dissent from the common opinion, that cod-liver oil possesses peculiar remedial properties, I am inclined to the belief that its efficacy is owing mainly, if not wholly, to its calorific power. It has almost uniformly been observed, that the few patients who have phthisis after a habitual use of fat meats, are little, if any, benefitted by cod-liver oil; and, on the contrary, those have been most benefitted by it who have been accustomed to oily nutriment.

But the great importance of oily food, in relation to this disease, consists in its preventive efficacy. In most cases of unequivocally developed phthisis, all curative plans of treatment fail. Prevention is the great object; to accomplish which, I feel assured, a rational plan of diet—a proper combination of nitrogenized and calorific food—may be employed with most salutary effect. The significant fact, that the subjects of phthisis are, with few exceptions, those who avoid fat meat, should be generally known. Young persons should be fully warned against this dangerous error. The gay miss of eighteen, whose countenance to the practical observer, clearly shows the want of calorific nutriment, should be plainly told that if this error of diet is continued, phthisis will claim her as a victim before forty-five. In short, all persons who avoid fat meat should fully understand their danger. It is no pleasant office to press upon the attention of our young friends and patrons such homely truths; but the physician who faithfully and candidly does it, will sometimes have the glad reflection of having saved a patient from premature decline.

This aversion to oily food is by some persons easily overcome; while others require a long-continued trial—a contest that the patient must realize as between life and death. Some young ladies, in compliance with an extorted promise to eat daily a small portion of fat meat, I have known to cover a morsel between two thin layers of bread, and thus swallow the nauseous dose, until perseverance has successfully disciplined the appetite; and in no

instance, except in hopeless debilitated patients, has resolute persevering effort failed of eventual success. This disciplining process is commonly aided by the use of iron, quinine, and other tonics, to invigorate the digestive organs.

Not only in phthisis, but in various other diseases, imperfect calorification occurs in consequence of want of oily nutriment.

Many of the prominent symptoms of cholera infantum are dependent on this cause—indeed, most of the obstinate cases of this disease, terminating with enlarged mesenteric glands and other symptoms of the scrofulous diathesis, are in subjects whose diet has been deficient of oily material; and a most important indication of treatment is to supply this want by cautious use of butter and other oily nutriment.

Dyspeptics, restricting their diet to a very limited variety, almost invariably avoid oily food, and imperfect calorification, constitutes a prominent feature of the disease.

So, in protracted cases of typhus, the pale cold skin and extreme debility, doubtless are, in part, owing to this cause. Patients accustomed to a free use of calorific nutriment, when attacked with this disease, are usually allowed no food of oily nature. If broths are directed, the nurse is careful to skim off all the grease; while the symptoms of imperfect calorification are combatted by stimulants and other medication, instead of supplying the system with its natural fuel, calorific food.

The Condition of the Nutritive Function in Diseases.—The various derangements of this function constitute, in many diseases, the most prominent symptoms. In febrile diseases, especially, the secretions are sometimes morbidly increased, but more commonly diminished or suspended. Commencing with the primary organs of digestion, the salivary secretion is diminished, and the tongue, with the whole interior of the mouth, is dry. The secretions of the stomach are similarly affected. As described by Dr. Beaumont, "in febrile diathesis, or predisposition, from whatever cause—obstructed perspiration, undue excitement by stimulating liquors, overloading the stomach with food—fear, anger, or whatever depresses or disturbs the nervous system—the villous coat becomes sometimes red and dry, at other times pale and moist, and loses its smooth and healthy appearance; the secretions become vitiated, greatly diminished, or entirely suppressed; the mucous coat scarcely perceptible; the follicles flat and flaccid, with secretions insufficient to protect the vascular and nervous papillæ from irritation." * * * "These diseased appearances, when very slight, do not always affect, essentially, the gastric apparatus. When considerable, and partic-

ularly where there are corresponding symptoms of disease, as dryness of the mouth, thirst, accelerated pulse, &c., no gastric juice can be extracted, not even on the application of alimentary stimulus. Drinks received are immediately absorbed, or otherwise disposed of; none remaining in the stomach ten minutes after being swallowed. Food, taken in this condition of the stomach, remains undigested for twenty-four or forty-eight hours, or more, increasing the derangement of the whole alimentary canal, and aggravating the general symptoms of disease."—(*Beaumont's Observations.*)

The biliary secretion is diminished, increased, or vitiated. The eliminating functions—defecation, perspiration, and the urinary secretion—are more or less affected. In some way, in almost all diseases, the action of the nutritive apparatus is disturbed by manifest disorder in some of its various organs; and the symptoms caused by this disorder often constitute the most important indications for treatment.

The causes of this disorder are, in many cases, to be traced to a habit of hurried, frequent, or irregular eating, an excessive use of drinks, improper food, or other errors of diet, which have been already noticed; and, in the treatment of disease, the first indication often is to correct these errors.

Cheiloplasty.—This operation of lip-making has been performed by Professor Eve, of Nashville, in a case of great difficulty, The patient was a stout, healthy youth of good habits, aged 18 years. The upper lip had been destroyed by salivation. From the points of each commissure of the mouth upwards for about three-fourths of an inch, and across the base of the septum of the nose, including one of its wings, and a portion of its column, was a vacant space occupied only by the teeth and gums. A hard cicatrix defined the outline, closely attachd to the alveolar and bony structures. This was exsected, and then two long incisions, about one inch apart, on each side, were made through the cheek, extending to near the ears. These were dissected up to make a new lip, and secured with three hare-lip pins and one suture in the mesial line. Stitches were placed in the cheeks, and the whole was further secured by adhesive strips, compresses and rollers. The operation was successful, presenting "a pretty fair upper lip;" and is the most extensive and difficult operation of the kind which has ever been performed, constituting a triumph of surgical skill highly creditable to the distinguished operator. —*Memphis Medical Recorder.*

Cholera Infantum.—An anonymous correspondent of the

Western Lancet—(scientific journals should have no anonymous correspondents)—says he has been able to control the pulse, in this disease, in a child two years old, by one-fourth of a drop of tincture of veratrum viride every twenty-four hours! In that stage of the disease when the nervous system suffers greatly, with cerebral irritation, he advises a combination of the extract of belladona and the tincture of aconite. Two grains of the extract are rubbed up in an ounce of water, and twenty to forty or fifty drops, with eight drops of the tincture of aconite are given every four to eight hours. Soon a universal rash appears over the cutaneous surface, and the bowels are much relieved, while the skin has become soft and somewhat moist. He gives quinine all the while, six times in the twenty-four hours, in two-grain doses. No doubt quinine is a valuable remedy, and in many cases is indispensable, but twelve grains a day is rapid dosing for young and feeble children.—*Memphis Medical Recorder.*

Legal Responsibility.—Judge Minot, of Pennsylvania, has laid down the following rules of law, as applicable to physicians. I. The medical man engages that he possesses a reasonable degree of skill, such as is ordinarily possessed by the profession generally. II. He engages to exercise that skill, with reasonable care and diligence. III. He engages to exercise his best judgment, *but is not responsible for a mistake of judgment.* Beyond this, the defendant is not responsible. The patient himself must be responsible for all else; if he desires the highest degree of skill and care, he must secure it himself. IV. It is a rule of law, that a medical practitioner never insures the result. These are received in general as sound views, as such as will govern every enlightened court. There could scarcely be a greater absurdity than to require physicians and surgeons to insure the result, when they can in no case control all parts of the treatment. Few serious cases are carried through a single day, and many not a single hour, without a violation of instructions, on the part of nurses and attendants.

MISCELLANEOUS.

Obituary Record.—Died, in Petersburg, Va., Dec. 6, 1855, in the 40th year of his age, John Frederick Peebles, M.D., one of the editors of the *Virginia Medical and Surgical Journal*, and author of several valuable communications to the *American Journal of the Medical Sciences.*

The Petersburg Medical Faculty, of which Dr. Peebles was one of its brightest ornaments, have adopted resolutions expressive of grief at his loss, and of the respect they entertain to his memory.

— Died at Hordle Cliff, near Lymington, Hants, Dec. 16, aged 69, WILLIAM FRED. CHAMBERS, M.D., K.C.H., F.R.C.S., London, &c., &c. Formerly physician to the Queen.

— Dec. 4, at his country seat, near Blairgowrie, Sir GEORGE BALLENGALL, Regius Professor of Military Surgery in the University of Edinburgh, &c., &c., aged 75 years.

☞ At the solicitation of many friends, we will, in the next number, republish the series of articles on the Geology of Tennessee, which appeared in the second volume. These articles will, however, be entirely re-written, and so much enlarged that they will constitute, in fact, new matter for the Journal. The first series was written with the view of directing the Legislative Assembly of Tennessee, of 1854, to the importance of providing for a geological survey of the State. They are now re-written so as to present a sketch of the geology of the State. During the last two years, we have personally examined nearly all of the important mineral regions of the State, and examined nearly all its geological formations. The result of these explorations will be incorporated in the forthcoming sketch. In addition to the geological sketch, we will also present a brief description of the minerals and ores found in Tennessee, with their mode of testing and working. RICHARD O. CURREY.

EAST TENNESSEE MEDICAL SOCIETY.—The semi-annual meeting of the East Tennessee Mecical Society will be held in the city of Knoxville on the *Second Wednesday of April next.*

An Address will be delivered by Samuel Pride, M.D., of Maryville, and a Dissertation read by John L. Atlee, M.D., of Athens.

The attendance of the Physicians of East Tennessee is invited to this semi-annual meeting.

JOHN J. MOORMAN, M.D., *President.*

O. F. HILL, M.D., *Rec. Secretary.*

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ORIGINAL COMMUNICATIONS.

A SKETCH OF THE GEOLOGY OF TENNESSEE,

CONTAINING A DESCRIPTION OF ITS MINERALS AND ORES—THEIR VARIETY AND QUALITY—MODES OF ASSAYING AND WORKING, TOGETHER WITH THE CHARACTER OF THE SOILS AND THEIR PRODUCTIVENESS.

BY RICHARD O CURREY, A.M., M.D., KNOXVILLE, TENN.

The importance of Geological observations is based upon their accuracy, and this accuracy can only be secured by actual examination by the observer himself. It is easy enough to compile from the labors of others; but to take the field, compass, hammer and chisel in hand, and search out the character and extent of the various formations of a district of country, *hoc opus est.* But viewed in any respect, whether as occupying the mind and attention while seated in the cabinet, assaying and analyzing ores and minerals, and arranging and labelling them, or pursuing the more arduous, and the more creditable part of the profession, making field surveys for one's own self, studying the various ores and minerals, rocks and soils as they are arranged in the cabinet of Nature, there is a pleasure and a delight unknown in its full fruition but to the votaries of this science. The author of the following pages offers the results of his explorations in this field of

scientific research, under the confident belief that if he adds but one stone in the Temple of Science, he has achieved that which fully compensates for all the labor he may have undergone.

It was my good fortune often to accompany that distinguished Geologist, the late Dr. Gerard Troost, in his geological excursions throughout the State, and to assist him in assorting and classifying the various minerals and ores and fossils obtained during these surveys. Thus during a period of eighteen years, sometimes accompanying Dr. Troost, but more frequently alone, the Eastern and Middle divisions of the State have been traversed in various directions, and in these travels, prompted solely for his own gratification, the author has neither sought nor received one cent's compensation for his labors, either from State, companies or individuals. Many sections of local formations have been prepared which yet remain in manuscript: but in 1854 I published a Geological Map of Tennessee, as the result of these several explorations, which subsequent examinations of new districts enables me to correct.

The following mineral regions are embraced within the limits of Tennessee, all of which, to a greater or less extent, have been examined:

1. *The Copper Region* first developed in the south-east corner of Polk county, but has been found to embrace the entire range of the Unaka Mountains, and may therefore properly be designated as the *Unaka Copper Region*. This region begins at Alabama and extends N. E. through Georgia, along the boundary between North Carolina and Tennessee, and into Virginia. The ore is found associated with the Metamorphic mica slates, quartz and sandstones.

2. *The Gold Region* is limited in Tennessee to Polk and Monroe counties, but there is no doubt as to its connection with the Georgia Gold Region on the South, and probably with the Virginia Gold Region on the North. The same chlorite slate which accompanies the metal at Coqua Creek may be traced to the South-west, cropping out on the abrupt cliffs which overhang the Ocoee River. The metal is found associated with quartz and chlorite slate.

3. *The Slate Rock Region* along the western declivity of the Unaka mountains extends the entire width of the State, and offers inducements for manufacturing operations as well in slate as in alum and its saltpetre caves.

4. *The Cranberry Iron Region* as it exists in Carter county and those adjoining to the south, and affording the magnetic oxide of iron, yields the best metal in the world. The accompanying pyroxene rocks indicate a continuation of the strata found associated with Gold on Coqua Creek.

5. *The Marble Region*, existing in not less than six different strata running throughout the entire length of East Tennessee, differing in character as well as in color, those near the Unaka mountains, being breccias and primordial limestones, while those through the interior counties being fossiliferous. This region is extensive, and affords as fine marble as can be found any where in the Union.

6. *The Lead and Zinc Region* traceable in one vein from Elizabethton, Johnson county, through New Market Valley, and thence to Blount county, and in another through Powell's Valley, and into Anderson county. The two ores are associated, and are found imbedded in limestone strata.

7. *The Appalachian Iron Region*, extending along the eastern declivity of the Cumberland Mountains from Virginia to Georgia, affording the scaly oxide of iron or red hematite.

There is also another variety, the Carbonate of iron found in the counties adjacent to Ky.

8. *The Coal Region* of the Cumberland mountains interstratified with sandstones and shales, and varying in thickness and quality. We need as yet a good and accurate survey of this highly important region, with every out crop of coal mapped. In the four different directions in which my reconnoisance of this field has led me, I have found such an abundance of coal as would justify the conclusion that coal contained within the limits of Tennessee is inexhaustible, covering the entire area of the Region.

9. *The Silicious Region* of Middle Tennessee, composed of thick strata of flint or chertz rocks, and, at an average altitude of 300 feet above the limestone region of the interior counties of Middle Tennessee, surrounds it entirely like a girdle. It is also the region in which the Iron Region of Middle Tennessee is found.

10. *Iron Region of Middle Tennessee*, composed of the hydrated oxide of iron, constituting immense iron banks, and being the source from whence a large portion of the iron of the west is obtained.

11. *The Limestone Region of Middle Tennessee*, noted for its fertility, situated in a basin, surrounded by the Silicious Region, and composing nearly all of the interior counties.

12. *The Marl and Green Sand Region of West Tennessee*, though differing essentially in its geological characters, presents a field as equally interesting as the others from its inherent fertility, and its adaptedness for enriching the worn out fields in the less productive portions of the State.

13. *The Region of Recent Formations*, extending along the Mississippi and to various distances into the interior,

composed of fluviatile deposits intermixed with decaying vegetable matter, which has begun to assume a carbonaceous character constituting lignite.

These are the principal Regions of the State, and among them are to be found strata of other rocks, and deposits of other minerals, which will be more particularly noticed in the following pages:

CHAPTER I.

FORMER GEOLOGICAL SURVEYS.

As early as 1831, the General Assembly of the State of Tennessee provided for a Geological Survey of the State. Dr. Gerard Troost, then Professor of Chemistry, Mineralogy and Geology in the University of Nashville, was selected to undertake the work. The duty assigned him was to make this survey with the view of developing the Mineral resources, to make analyses of substances of value, examine the soils in different sections of the State, "with such other remarks as may lead the citizens to an estimate of comparative value and use, as well as to enable them to judge understandingly of its metals and minerals."

No limit was fixed to the duration of the appointment, but he was required to report to the next Assembly what he had done as Geologist, and for this work he was to be allowed $500. This act was passed after he had delivered a discourse before the Assembly on this subject, of which, by resolution, a copy was requested for publication.

In 1833 he was continued in office for two years, his salary now being fixed at $500 per annum, and such additional acts were adopted at each succeeding session till 1850.

I am not able to ascertain the character of the first Re-

port, nor when made, unless the discourse delivered in 1831 was so regarded.

The second Report in 1833, is noticed in the Journals of the House, an extract only being given by the committee on Statistics. The subject of the report appears to have been a description of the Coal Formation.

The third Report in 1835, contains, 1st, an account of the coal formation, with a map, as it exists in the Cumberland Mountains; 2d, marl, the soil of part of Middle Tennessee, and an account of some of the iron ores, with statistics of Forges and Furnaces.

The fourth Report in 1837, begins with an outline of the Science of Geology, and then gives a description of the Ocoee District. A note is appended containing a list of the organic remains found in the Mountain Limestone of Tennessee.

The fifth Report in 1839, gives first an outline of the Geological formations in Tennessee, with their characteristic fossils; second, a particular description of Cocke county, its minerals, soils, streams and vegetation, and the meteoric mass of metalic iron found in that county; third, additional investigations into the iron ores of the State. and fourth, a notice and analysis of the silver ore (sulphuret of silver,) found in the bed of Caney Fork on Cumberland Mountain. This Report also contains an appendix, giving a list of the organic remains.

The sixth Report in 1841, contains, first, an account of the changes that had recently been introduced into the nomenclature of the Science; second, a general description of Sevier county, and third, an account of the roofing slate of East Tennessee, and of the abundant materials for the manufacture of alum, sulphate of magnesia, and saltpetre, concluding with the analyses of several

Mineral Springs in various parts of Middle Tennessee.

The seventh Report in 1843, contains, first, descriptions of the counties of Davidson, Williamson, Maury and Perry; second, a more minute description of the green sand in McNairy county, and third, a list of some of the animals in the State. In a supplement to this Report, attention is directed to the lead and zinc ores in East Tennessee.

The eighth Report in 1845, describes the most advantageous routes for the construction of the Nashville and Chattanooga Railroad, especially with reference to the abundance of coal, alum, iron, limestone and sandstones on these routes.

The ninth Report in 1848, contains, first, a description of Jefferson county, and second, an account of the zinc ores of Tennessee.

The tenth Report in 1850, was purely scientific in its character, giving a short account of the Crinoidea of the State. It was not published.

Such has been the interest awakened in regard to the mineral wealth of Tennessee, that these reports are in great demand. But as no care was taken to preserve them, they are scarcely to be found complete. But while it may be admitted that they do not in every instance point out the exact localities of minerals and ores, but deal rather in generalities; yet every succeeding Geologist will find, as much as they may seem disposed to underrate the labors of this man of Science, that his Reports will be sure guides to further discoveries, and we will be much mistaken if they are not oftener consulted than their author receives credit. If properly compiled and edited, no better text-book on Geology could be placed in the hands of a Tennessee student.

They evince clearly the industry and the scientific attainments of the man to whom the survey was entrusted. We see him, in the infancy of the science, entering upon the examination of an unexplored field, as varied in its geological formations, minerals and fossils as in its climate and scenery. We see him toiling alone, at one time, along the rugged mountain sides, then winding his way up the quiet and shady valley, penetrating the inmost recesses of the earth, exploring the plains and the fields, and developing the mineral resources of the State, and for what?—not surely for the pittance granted him as compensation for his labors, but through his innate love for the noble science which he had espoused. From 1831 to 1850, his exclusive study was the soil, the rocks, the minerals, the plants, and animals, and especially the fossils of Tennessee, musing alone upon these ancient inhabitants and reading in them the history of the dark ages of the earth. The Cabinet of Natural History, perhaps second to none in the Union, which he collected and arranged, composed in a great degree of the results of his own explorations, especially in organic remains, is a monument to his industry and scientific knowledge. It marks at present the spot where he labored. But there is also due to him a monument of *Tennessee* Marble to mark the spot where he now rests from him his labors.

During the Session of the Legislature in 1854, Prof. J. M. Safford, of the University at Lebanon, was elected Geologist of the State, and his first Report will be made during the present winter, (1855.)

With this synopsis of what has been done for the development of our mineral wealth and agricultural interests, I will proceed to set forth, as briefly as the subject will admit, what remains to be done to advance the State to

the position which her resources and advantages justly entitle her.

My subject will lead me to an examination of the geological formations of the State. Taking up these, therefore, in the order in which nature has placed them, I will endeavor to trace out the extent of each—the minerals found in them—their adaptation to agricultural interests—and their economical relations in every respect. The great length of the State, compared with its breadth, causes it to partake somewhat of the peculiar formations of each State by which it is surrounded. And as it is divided by natural boundaries into three great divisions—it is a singular fact that these lines also serve as lines of demarcation between its principal geological formations. These, in the order in which they are found, embrace:

1. The unstratified, granite rocks—Smoky Mountains.
2. The stratified Metamorphic rocks—Smoky Mountains.
3. Lower Silurian—East Tennessee and Nashville.
4. Upper Silurian—Middle Tennessee.
5. Old red sandstone, or Devonian—Cumberland Mountains, East and Middle Tennessee.
6. Carboniferous system—Cumberland Mountains.
7. Cretaceous system—West Tennessee.
8. Alluvium—Mississippi River.

It will thus be seen that there is a regular order in the formations from the old to the more recent, and we shall, in our remarks, examine them as we have found them, in each grand division of the State.

CHAPTER II.

EAST TENNESSEE.

Geological Sketch.—There is not found in the Union a more interesting field of the same extent for geological ob-

servation than is afforded in East Tennessee. This is true, not only with reference to the vast numbers of useful minerals imbedded in its strata, and the great quantity of some of them, but also to the complicated arrangement and peculiar character of its rock strata.

In describing, therefore, the formations existing here, and their economical applications to the wants of society, I will begin at a point in the State line on the Smoky Mountains, where it intersects with the Georgia line. From this point draw a line in a N. W. course to Knoxville, thence N. E. to Tazewell, thence N. W. to the Cumberland Gap, and every important stratum will be passed over. On this summit of the Smoky Mountains there are to be found the primordial rocks, consisting of granite, gneiss, mica slate, talcose slate, and quartz rock, containing imbedded crystals of actynolite and garnet. These primordial rocks are not traceable exactly on the boundary line between this State and North Carolina, but sometimes deviating to one side and then to the other. Dr. Troost, with whom I had the pleasure in 1839 of tracing out a portion of this line of demarcation, thus describes these strata in his fifth Geological Report:

"In Carter county the primordial rocks are found ten or twelve miles west of the line; the whole of Roane mountain is composed of granite rocks. The primordial mountains then diminish, and about the head waters of Indian creek are no more to be seen in that part of Tennessee. The State line then runs over the grauwacke formation or group, till near Wolf creek in Cocke county, where the primordial rocks again enter Tennessee. The high ridge of the great Smoky mountain is granitic till about the entrance of Tennessee river into Monroe county, where the grauwacke group again makes its appearance, continuing along the Unaka mountains to M'Minn county. Here again the primordial rocks enter the State, and continue on to Amoee river, where they are replaced again by the grauwacke group.

"Towards the east of the high ridge of the Appalachian chain,

the primordial rocks generally prevail. This high ridge which separates these formations and which contains in its limits the highest mountains of the United States, is sometimes composed of granite and gneiss as Roane mountain; sometimes of a granite, which contains talc and chlorite or protogene; sometimes of a talcose rock containing actynolite. It contains also some veins of magnetic oxide of iron, as the Cranberry ore in Carter county, which is associated with *Pyroxene Sahlite*, as in some of the Swedish iron ore—or is not associated with any other mineral, as in Cocke county."

Where we begin our reconnoisance, they cross the mountain, and on the western descent we soon enter upon a series of sandstones and shales and slates of a primitive or metamorphic character. These strata are found to possess an inclined position, the dip being inwardly S. E. to the centre of the mountain, giving the appearance to the primordial rocks, which they actually do, of overlying these stratified rocks. The dip of these strata being to the E. S. E., the strike or course of the upturned edge is from W. S. W. to E. N. E., observing the general direction of the mountain range. But continuing our descent to the west, when we have reached the base of the mountains, we come upon a series of strata belonging to a more recent date, and affording the characteristic fossils of the Silurian period. These consist of various limestones with interstratified shales and sandstones. And as a general rule, if we start from a point near the Frog Mountains on the Georgia line, and take an E. N. E. course, we may trace out the line of separation between the Metamorphic slates of the Unaka group, and the limestones and other strata of Silurian formation. Thus as we continue our course to the N. W. from this mountain range, we come next upon a stratum of limestone composed of fragments of several shades of gray and black, with white veins, cemented together with the same substance, forming a beau-

ful breccia marble, then to a hard magnesian limestone and then successively over the uplifted edges, and at right angles to the course, of each stratum, till we have passed about five miles to the N. W. of Tazewell. To this point, each stratum of rock, whatever might be its character, is found to possess similar dips and courses, the angle of inclination being about 45 degrees—unless in a few localities where silicious veins have evidently been forced up through the disrupted rock strata. But a new arrangement presents itself at the point alluded to. As it is approached the strata are found to become less inclined, until at last they have assumed the *horizontal* position. This *anticlinal* axis is about three miles wide, and composed of a hard Magnesian limestone, very fully intermingled with chertz rock; in fact, this latter imparting to the former quite a silicious character. The strata to the N. W. of it dip in an opposite direction—gradually inclining to an angle of 45 degrees and more, until they are lost under the Cumberland Mountains.

This axis and these opposed strata, possess the same course as those previously described. To illustrate this, take a book and, partially opening it in the middle, place it upon a table on its edge, the horizontal back will represent this anticlinal axis, and the leaves, the strata inclined against each other. The strata on each side of this axis are identical in every respect. It may be traced from the base of the Cumberland Mountain to the North of Clinton in an E. N. E. direction into Virginia. The stratum which composes the axis is found in several other localities through East Tennessee. I have found it in some places so disintegrated by the washing out of the limestone that the mass which remained, consisted almost entirely of white sand. As yet I have discovered no traces

of organic life in it; but its character may be readily determined by its crystalline disposition, there being observed frequent minute rhomboidal crystals, either projecting or being washed out and leaving the same regular cavity.

In addition to this axis, several others are found, but generally they are local, limited in extent, but nearly all of them are composed of the same stratum. There is one about 15 miles to the west of Knoxville, in which the opposing strata are found on opposite sides of a narrow valley, each dipping outwards, and tending to unite by an imaginary line about mid-way of the valley. Another limited axis is found on the north of Clinch river; the strata here in fact presenting quite a disturbance, twisted and broken up in various places. At the Chattanooga quarry, and in the Lookout range, there is also a singular distortion in the strata. The quarry at Chattanooga, and the strata composing the mountain dipping to the south-west, and of course lie inconformably with other strata in towards the Raccoon mountains. As the greater number of these axes are composed of this hard magnesian limestone, with chertz or silicious interstratifications, it may be regarded as the lowest or oldest member of the silurian rocks in East Tennessee, and that it lies immediately upon the Unaka slates and shales.

Its position with reference to the other strata of East Tennessee is in the following order:

1. Unaka granite, gneiss, mica slate, quartz rock and sandstone.
2. Aluminous slates and talcose slate.
3. Magnesian limestone with veins of chert or silex.
4. Magnesian limestone with semi-crystaline veins of calcareous spar.

5. Blue fossiliferous limestone.

6. Red and greyish argillaceous limestone interstratified with hydraulic limestone.

7. Shales and sandstone underlying the coal measures of the Cumberland mountains.

These seven different strata may be passed over at several points in passing along our line of reconnoisance. And the casual observer would overlook the regular order in which they invariably occur. But though there are only these seven peculiar strata, yet there are not less than fourteen such series, making altogether through the valley of East Tennessee not far from forty strata of rock. What caused this disruption? and how is this regularity obtained? We may imagine the rock strata of this whole district once to have possessed a horizontal position, and violent subterraneous action, being exerted in right lines, in a N. E. and S. W. direction, broke up and elevated the strata all along that line where the force was expended. We can suppose this force to have been exerted whenever one series of rock changes for another, and to have been of just that degree to have elevated the strata to an inclination of 45°, thus producing in fact a succession of *faults*, to speak in the language of miners.

Now to solve this problem of their formation, we have but to cast a glance at the physical configuration of the country. Here is a valley, bounded in on the east and west by parallel ranges of mountains of different geological periods, yet the origin of both attributable to violent subterranean action. The Unaka mountains on the east consisting of the primordial rocks, of course are readily admitted as being beneath the fossiliferous strata of East Tennessee, while this lies underneath that of the Cumberland mountains on the west. Now how is it that these

Unaka granites and slates are tilted up, and apparently reclining upon the limestones of the valley? This can be only explained on the theory of these faults by local action. They do not present the appearance of being disrupted in that way to produce similar strata on each side of the line of action, for then there would appear a succession of anticlinal axes wherever the force was expended. Neither are there any synclinal axes of any extent to be found, setting at rest any idea as to a depression at any point opposed to the force of elevation. This force then acted in such a way as to break the strata and elevate one end of the fragment, while the other remained stationary, and elevating it too to that height that the adjoining fragmentary strata would seem to underly it. Then again the Cumberland range, constituting an immense coal field, now elevated to a height of more than 1,000 feet above the level of the country, doubtless was once an extensive inland lake, in which all the animals and plants of the carboniferous era lived and flourished, extending from the interior of Alabama to New York. But at the time of these volcanic disruptions, the bed of this lake was elevated, it may be, gradually, to its present altitude, the waters being drained off, and an immense coal field provided for the benefit of man, the last great act of Creative Power.

Thus the mountain ranges on either side, as well as those of less altitude in the valley, and the valley itself, with its streams and rock strata are all parallel, possessing a N. E. and S. W. course.

Observe moreover the uniformity with which the members of each series succeed each other. Thus supposing we indicate the above strata by figures, we have in one series 4, 5, 6, 7, in the adjoining 4, 6, 7, in the next 4, 5,

6, but never any reverse order as 7, 6, 5, 4. This regularity is of decided advantage, especially in those strata which can be applied to the wants of society. It enables the quarrier to trace out a stratum, or the miner to sink shafts without an useless expenditure of time and money. Two instances may be adduced. The strata, mica slate and quartzose sandstone with gossan in which the Copper of the Ocoee District is found, partake of this same general inclination, and a direct E. N. E. course. The miner therefore reckons his distance for sinking his shaft through the overlying strata, and can readily trace out the course of the vein. And again, No. 4 in the series of rocks is a valuable stratum of Marble which is found to occur *five times* in our line of observation, namely, near the base of Chilhowee Mountain, one mile south of Knoxville—one mile north of Knoxville—north of Clinch mountains, and near Tazewell. Possessing the same E. N.E. course with the other strata, each one may be traced out in its entire length. Take the stratum, for instance, north of Knoxville, and it is the same found at or near New Philadelphia, and near Rogersville. It is supposed by some that there are different strata of different colored Marbles, but I am inclined to the belief that these different colors are but layers of the same stratum, and that the reason why the Marble is found red at one place, white at another, and blackish at a third, is due only to the partial appearance of these different layers. So inexhaustible in quantity, and acknowledged by competent judges at the New York Industrial Exhibition, and at the Capitol at Washington to be of an unrivalled quality, there are only needed the facilities of transportation to render this a source of enterprise and wealth.

(*To be continued.*)

ART. XIX.—TWO CASES OF PSOAS ABSCESS.

BY BENJAMIN FRANKLIN, PHILADELPHIA, TENN.

It should never be a task, but a pleasure to the Physician at any time to promote the welfare and interest of his Profession by giving the result of his Practice, to assist in filling the pages of any well-conducted Journal, or society that has for its aim the promotion and welfare of our profession.

The case I propose to offer is one of not very common occurrence in our common country practice. I never have seen but three cases of the kind since I began the practice. One of these was caused from a fall, in the person of a young man aged about twenty-five years, of strumous diathesis, and receiving the force of the fall upon the lumbar region, causing considerable contusion, degenerating into a low scrofulous inflammation, and finally terminating in a deep seated lumbar or Psoas Abscess, which upon being lanced beneath Poupart's Ligament, at the usual place, discharged a large quantity of thin scrofulous matter, terminating in hectic irritation and fever, and which resulted in the death of the patient in about four months.

Believing the Pathology of Psoas Abscess to be a scrofulous inflammation of either the Psoas Fascia, or soft Psoas muscles, and that in this case the peculiar diathesis of the patient to be only developed and located by the contusion incident to the fall, I placed the patient on an alterative tonic course of treatment, consisting of syrup Ferri, Iodide, thirty drops, administered in three ounces of tinct. of sarsaparilla, to be given three times per day. Also to use the warm salt-water bath three times per week, with setons, issues, &c., locally applied, all of which treatment proving abortive, the patient, as above stated, lingered a few months and died.

The second case occurred in the person of a stout and athletic man, aged 35 years, which seemed to be entirely idiopathic, there not being any known exciting cause or hereditary predisposition to such affections. A man of previously good health, and by trade a brick mason. When application was made by him to me

for medical advice, he seemed from all the physical signs connected with his case to be laboring under an attack of chronic nephritis, evinced by decided pain on pressure over right kidney, with frequent desire to void his urine, which, when passed, was small in quantity, of a strong ammoniacal odor, bearing the color in every respect, of sweet oil. Upon applying the highly recommended test of Prof. J. K. Mitchell, of the Jefferson College, Philad., that of collecting a small quantity of urine in a small glass-tube, with a narrow neck, and then turning the contents out hastily, I found the bulb filled full of very large bubbles of air, evincing clearly the presence of a superabundance of albumen in the urine, showing thereby strong evidence of a scrofulous degeneration of the malpighian glands of the kidneys, known as Bright's disease of the kidney.

This patient had in every respect all the symptoms of this most formidable disease, which continued for nearly twelve months, at about which time the symptoms of this disease seemed to entirely subside, leaving the patient free from any evidence of albuminaria, and in fact all other constitutional disturbance—so much so that he resumed his occupation, and followed it without the least inconvenience for nearly twelve months, when he began to feel unpleasant sensations in his back, similar to that of lumbago. I advised him at once to suspend his occupation, supposing that the stooping incident to his trade would be of decided disadvantage to him, which he accordingly did. His condition seemed to grow worse. He applied to me for advice, and upon a careful examination I found no disease remaining in his urine, neither in quantity nor quality, his urinary organs seeming to be in a perfectly normal condition. Suspecting then that some metastatic scrofulous inflammation might be locating in the lumbar region, arising probably from the previous disease in his kidneys, I examined carefully, and found that matter had not only formed, but was absolutely pointing below Poupart's Ligament, forming a tumor as large as a small egg. Believing then the case to be one clearly of Psoas Abscess, caused by the development of the still latent scrofulous matter remaining in his system since his previous attack of Bright's disease of the kidney, excited probably by his

occupation, I addressed my remedies accordingly, which consisted in an alterative tonic course, similar in every respect to the one first instituted in his case. There is one peculiarity here connected with this case that I never saw before, either in practice or medical writing, which is the evident connection between the first attack or that of Bright's disease, and this lumbar or Psoas Abscess. It was at first clearly a case of Bright's disease, which seemed to entirely subside for nearly twelve months, not leaving even a vestige of this disease that could be detected, either by the chemical tests of heat, and nitric acid, or that of Dr. Mitchell. Now could this be a case of metastasis of chronic inflammation of the kidneys? or was it his occupation, developing this accidental scrofulous diathesis, yet remaining in his system after his recovery from his first attack?

On the 25th of July, the thermometer standing at 105 degrees, I made a valvular opening into the seemingly small collection of matter, which had pointed beneath Poupart's Ligament, and drew off half pint of scrofulous matter, bearing in every respect a strong resemblance to buttermilk, with a considerable quantity of sanies or ichorous matter floating through it. Finding the discharge beginning to prostrate my patient, I accordingly introduced a small tint, and stopped the discharge, and left the patient with directions to keep the limb wrapped or covered in a large warm poultice, which should be removed as necessity required, and also the limb to be relieved of the matter as his strength would bear.

Upon my next visit I found him with a rapid and irritable pulse; also a very offensive and ichorous discharge, going on from the part, and evidence of a mortifying condition in the limb below the place where it was opened, extending down to within an inch or two of the knee-joint. Supposing that there might be pouches of matter found and burrowing through the muscles and cellular tissue of the thigh below the point of opening, I accordingly made a bold incision extending to the bottom of the abscess, extending from the point of opening to within an inch of the knee joint, and found the whole thigh beneath the strong Fascialata to be in a perfect state of ulceration, and covered with a thick layer

of scrofulous and sanious matter. Upon finding the limb in this condition, and in point of temperature preternaturally cold, I directed the whole limb to be covered with a large warm poultice, and the cavity or seat of abscess to be washed or syringed with a strong solution of nitrate of silver, once every day. Under this treatment, accompanied by stimulants and tonics, in a few days, the limb threw off a large slough, consisting of the whole cellular tissue of the thigh, extending down the whole length, or the entire side, under which was seen a fine crop of healthy granulations sprouting, which continued to grow until the whole destroyed portion of the limb was reproduced as high up as to where the first opening was made in the thigh above. There is one practical point here fully shown in this case, which all Physicians should carefully notice in the treatment of this formidable and withal deceiving disease. I say deceiving, for I know of no word by which to better express my idea, and that is the possibility of matter burrowing and making frightful inroads upon the thigh before it shows much evidence of its great collection at the place pointing beneath Poupart's Ligament. To avoid this danger, would it not be better in every case to lay open the tumor immediately after discovering it, than run the risk of this frightful burrowing? In this case it seems that the place of pointing was through the opening in the Fascialata, through which the external saphenous vein dips to enter the large vessel beneath, and that the great accumulation of matter was caused by the resistance offered to it by the strong Fascialata, which is thicker and stronger over this region of the thigh than elsewhere. So dense was the Fascialata, and so strong and powerful the resistance offered by it, to the spreading of the matter, that it seemed to direct its way down the thigh without causing any perceptible enlargement of the thigh except in the immediate vicinity of the tumor under Poupart's Ligament, well calculated in its nature to deceive the most careful medical observer.

A second accumulation took place, which I opened in the right lumbar region, which discharged freely, and in a great degree checking the discharge from the first opening, showing a perfect connection between the two openings. In two or three months

a third pointed near the tuberosity of the ischium, which had the effect of checking the discharge from the two previous openings, showing that they were only pouches formed by the same great fountain or source of disease located upon the Psoas muscles of the back. Shortly after this third abscess was opened, he was troubled greatly with spasmodic action of the large muscles of the thigh and hip, so much so that it required a large quantity of opiates to check it sufficiently to obtain sleep at night. This muscular contraction growing very severe, I was sent for, and found that a perfect dislocation of the thigh had taken place upwards and backwards, which I did not attempt to reduce, believing that it was no doubt caused by the spasmodic action of the glutei muscles, there being a weakened condition of the capsular ligament of the hip-joint, with the great accumulation of pus surrounding it, and consequent diminution of muscular pressure, which should spend its influence directly upon the bone while in this state of spasmodac action.

The treatment in this case has been one continued course of alteratives and tonics, consisting of the saccharine solution of iodide of iron, combined with tinct. of sarsaparilla, proper nourishing diet, &c., the sol. of iodide of iron, given in dose of 30 drops, three times per day, administered in ʒiij of tinc. of sarsaparilla. Warm salt-water bath given three times per week, with friction to the skin, setons and issues locally applied. After opening the abscess the last time, I introduced an additional course of treatment, which was the introduction of a long gum elastic catheter through the opening high up, upon the seat of disease, and directed a strong solution of nitrate of silver to be thrown up once per day. It has now been over two years since I began the use of the nitrate of silver, which was continued for about six months regularly, until the discharge began to fail, and I have had the great pleasure of seeing my patient after such long and severe suffering, gradually, but I think surely, recovering under its effects. There has never been any disposition in the abscess to accumulate since the introduction of nitrate of silver in the treatment of his case. He has used this injection twice per week up to the present time. The discharge has diminished

from near a half pint and over in the twenty-four hours, to not more than a tea-spoonful, and frequently none whatever, and what there is discharged being of the character of healthy pus.

I would recommend a trial of this remedy to the Profession, as both safe and efficient, in the treatment of this very distressing disease. For certain I am that this remedy by its antiphlogistic alterative and stimulant effect upon the part to which it was applied, caused the slough to be thrown off, and granulation to sprout and reproduce the parts destroyed in the thigh previously spoken of, and I am constrained to believe it has had the same effect applied to the seat of the disease high up among the Psoas muscles, and although he will be left in a deformed condition from the dislocation of his hip, he will be entirely relieved of the disease in the course of a very short time.

ART. XX.—HYGIENIC GYMNASTICS.

BY H. CULBERTSON, M.D., ZANESVILLE, OHIO.

Our subject limits us to the consideration of the effects of gymnastic exercises upon the human system, and again to that department of gymnastics, which has for its object, not the removal of human diseases, but their prevention, by perfecting the body as a whole, and is most properly styled "HYGIENIC GYMNASTICS." The relation which these bear to our super-natural endowments, will not be noticed; but the system considered or acted upon by these means *naturally*, *i. e.* by the law of "cause and effect."

Gymnasia had their origin in the wants of the people. So much of the animal has man in him, that combativeness has ever been a characteristic, acting betimes for *self*. The ancient was a combating age, less and less so until it was lost in the modern, and the people gave character to that age. Then war was constantly abroad, and combat was hand to hand, body to body. Self-aggrandizement dictated the strengthening of the body, and Gymnasia appeared as one of the means.

The Jews, devoted to their religion, could not be to war, and the only national exercise, therefore, which could affect them would

come through that. Of gymnastic sports they had none. They danced at their feasts to elevate religion, not to invigorate their physical organization. No Gymnasia graced Jerusalem in her healthy condition; but when the Hebrew nation so sickened, as to be unable to cast off outward pressure, it reflected upon her, and loosing her identity, Greece and Rome successively became her conquerors. These countries brought with them peculiarities some of which were adopted by the Jews; and in time the priests, as well as the people, ceased to follow rigidly their religion, and became to a certain extent *devoted* to the body. The first gymnasium among this people was established in the time of the Maccabees, by Iason, a Hellenised Jew. Herod subsequently completed what Iason had begun, building a Hippodrome even within the walls of the Holy City, and another at Cæsarea.

The ancient Greeks, like the Hebrews, were a pleasure-loving people. Differing from them in religion, they held tenaciously to its sacred form. They made God's form the exploits of earthly might, and worshipped bodily superiority. Young in age, they were weak in power, and having a desire to rule, feeling the necessity of self-preservation, their inventive genius taught them to perfect the body—hence arose among them Gymnasia.

The Lacedamonians have the credit of originating these institutions. Of these, the Isthmian established about 1830 years B. C., were the first; and the Olympic, instituted, as is said, by Hercules, about 1222 year, B. C., were the most celebrated. The latter, having fallen into desuetude, was revived and modified, so as to comprise intellectual gymnastics, by the advice of Lycurgus, under Iphitus. Medical gymnastics appeared shortly before the time of Hippocrates.

Grecian gymnastics were genial in their effects, until their excessive observance rendered them injurious; the preservation of the lives of men and brutes engaged in such was most generally a primary object; and not until Roman Gymnasia produced a contrary effect, did the exhibition of public death, form a main feature in them. Grecian gymnasia were salutary in their influence per force of Grecian intellect.

In many respects the Roman off-shoot was like its Grecian

trunk. The Romans being essentially war-like, military gymnastics early formed a part of their education; but intellectual gymnasia never was first with them; on the contrary, the introduction by them of gladiatorial exploits into these institutions, in the Varronian year 450, and of wild beasts in their public combats, in the 568th year of Rome, reveals a lower turn of taste, (even a desire to observe, and a pleasure in witnessing public death) to be their preference in these exhibitions. Cæsar surpassed all his predecessors in the splendor, extent, and variety of these shows.

Germanic conquests seem to have been the means of introducing Roman gymnasia into ancient Germany; that nation did not lose her identity in Rome; but the latter to a certain extent in the former. She being the powerful, moulded her institutions, and chose that from Rome which was congenial to her taste. She erected gymnasia per force of Roman example, and by the turn of her more modern intellect, has brought them into general use in her various states. They have connected them with education in such a manner that physical instruction is now a professed branch, of which each pupil feels practically the weight. The first institution of this character, in this country, was established by Salzmann, a German clergyman in Thuringia, in the latter part of the last century. After the French power, having subjugated Germany, gymnasia were depended upon as one mode of effecting the future supremacy of their land. Dr. John established his first gymnasium near Berlin, in 1811.

Gymnasia first appeared in France, under the form of tournament, about the ninth century, and no doubt had their origin from the influence of the Roman game, aided by that of the martial spirit of the German, their conquerors. Here, too, as in Germany, they have become a component means of their system of education. Hygienic gymnasia, being with them as common as our common schools.

The greatness of Rome subjugated Spain for a time, and those Roman customs crept in on that Moorish people. Gymnasia became familiar to them, and Spanish character gave them the Spanish form, which was darkened when this country became independent. The mildness of the Grecians was uncongenial, but

to them, the rough German character was more agreeable, hence from their nature and wants they found gymnasia suited to their taste, and gladiatorial scenes, the public death of both men and brutes, became a national custom, which continue to this day. Spain now has every variety of gymnasia; but Germany has no gladiatorial exhibition. So much do countries differ from each other.

The English, a people fond of exercise to a moderate degree, love it best in their pure open air. Yet as much as they appreciate bodily exercise at times, the subject of gymnastics is not sufficiently interesting to them, as a people, to lead to the adoption of them as a systematic *means* in their physical education. In the reign of Henry Eighth, the act of riding was introduced into England, and the various branches of physical exercise, even to animal contests became common, but were not taught systematically. Some nine or ten years since, a public contest between a lion and six mastiffs, was held near Manchester. The condemnation of the press was amply sufficient to prove the spirit of that country opposed to such forms of cruelty. So late as 1824, the first English gymnasium was established in London by Mr. Folker, a German.

In 1825, the first gymnasium was instituted in America, at Northampton, Mass., by Dr. Beck, a German, and pupil of John.

The Boston gymnasium opened under the charge of Dr. Follen, in 1826; previous to which time, in 1825, Dr. J. G. Coffin, editor of the Boston Medical Intelligencer, gave three lectures on the subject of modern gymnastics, in that city. During Follen's administration, a large number of pupils were taught, of various ages, from six to sixty; and Dr. Lieber, a gentleman from London, who formerly had been engaged in teaching gymnastics in that city, succeeded him in this institution.

On the 11th of June, 1827, the gymnastic exercises of Brown University opened, the Professor taking part in them as well as the student.

On the 1st of May, 1828, a gymnasium was instituted at New Haven, by S. E. and H. E. Dwight, on a plan uniting at once, mental and physical culture, in which were taught the various

academical branches, and a thorough course of hygienic gymnastics given.

From the influence of these, three other gymnasia were opened in various eastern and subsequently in some western cities. But although they have become so numerous as to lose their notoriety, they have not become identified with education throughout this country. In New England they form some part of the system of mental culture pursued—but being unprofessed, and unsystematized, it is a posture which cannot strictly be considered gymnastic.

It is much to be regretted, that the physical pliability of the *young*, now training in our schools and seminaries, is not sufficiently considered, to induce the forming of modes of exercise, from the influence of which present and future generations may, in part, derive the boon, HEALTH.

Having given a very brief sketch of the origin of Gymnasia, and their progress through several countries, we purpose considering Hygienic Gymnastics as an ART, the object of which is the production of HEALTH, under the following sections, viz:

1st. As to the laws relating to *Hygienic Means.*

2d. As to the *means* and their application, and

3d. As to the effect of the *art* on the human system.

[TO BE CONTINUED.]

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

An Essay on Intermittent and Billious Remittent Fevers, with their Pathological Relations to Ozone. By E. S. GAILLARD, M.D., Waukeenaka. Florida.

Many of our readers will doubtless remember the Ozone theory of Schönbein in the production of cholera. Additional investigations have been made upon the probable existence of this new agent, and the influence it exerts upon health, and it has now found a place in all the works on Chemistry. Two views are entertained by Chemists as to the constitution of this agent, one regarding it as oxygen in an allotropic condition, the other as a compound of oxygen.

We have received from the author, a pamphlet of 60 pages, from which we extract what he says respecting this body in its influence upon our fevers and other diseases. The entire treatise was presented as a Graduating Thesis, and had awarded to it the annual Premium of the Medical College of South Carolina:

OZONE.

"We will first state the most important *facts* which, in regard to this agent, we have been able to collect and collate from the most authentic sources, and then offer a few of the most reasonable suggestions that seem to flow therefrom. M. Schönbein, of Baslè, who first chiefly called public attention to the subject of Ozone, regards it as 'an independent body and constituent of the atmosphere' uniformly present, though in varying quantities. Faraday who has thoroughly and closely investigated this subject, and whose cautiously given opinions are entitled to the highest respect and deference, differs in a few unimportant particulars from Schönbein, but nevertheless supports him entirely in all of those views which are of the most practical importance. Schönbein regards Ozone as a binoxide of hydrogen, H. O^2; but as this equivalent is not always uniform, he prefers to style it a peroxide of hydrogen. Ozone is generated by the passage of electric currents through the atmosphere, or rather by the discharge occasioned by the meeting of currents charged, as in the form of clouds, with different electricites; "by electric combustion, and when the electric spark is discharged from the points of a conductor; by the oxidation of phosphorus, partly in water,

partly out of water, placed in large bottles with close stopples. Vapour is thus soon formed; and by washing the gas, which is insoluble, we remove phosphorous acid with the vapour of phosphorus, these last being soluble, and Ozone remains behind; by passing a current of electricity across the surface of water in a vessel, etc. Plants, not excited by light, act upon the atmosphere and produce this body. This gas, when concentrated, manifests an odour similar to that of chlorine; but when mixed with atmospheric air, the odour is 'similar to that emitted from an electric machine when in motion.' It is, in its effects, extremely injurious to the organs of respiration. Mice perished in an atmosphere only 1-6000th part of Ozone. This agent is insoluble in water; destroys organic coloring matters, as well as those having albumen, or lignin for their base. It has the greatest affinity for oxygen of any substance known; quantity prevailing in the atmosphere greatest in winter, least in summer; purifies noxious exhalations, though exhibited in the minutest quantity; destroys both idio and koino miasmata, and is able to purify 540 times its volume of inquinated air; hydrogen with selenium, sulphur and phosphorus, all in the minutest quantity in the atmosphere, yet render it fit for respiration; and Ozone, from *analogy*, supposed to belong to the same class. It is the most rapid oxidizer known; rapidly destroys hydrogenous compounds, a constant source of miasm liberated in gaseous forms, by the decomposition of vegetable matter, etc. The true nature of these gaseous compounds is not known; but here it is sufficient to know, that if these gases were allowed to remain long in the atmosphere, this would be rendered unfit for respiration. Malaria may be either a mechanical, or chemical compound of two, or more of these gases; yet forming by this combination *not* a gas, or a compound gaseous in nature; we have *water* formed by oxygen and hydrogen.

Faraday regards Ozone as an allotropic condition of oxygen, but admits it to be present when oxygen is present, or where and when water exists in a vaporiform condition.

The purifying properties of Ozone are proved by the fact that no deleterious substance has ever been separated from an atmosphere containing it in excess. Ozone rapidly diffuses itself in the air; if decomposed by heat; is manifested in increased quantity in the morning; forms an oxyde with, or is capable of oxidizing nitrogen; gives to the atmosphere peculiar chemical properties; bleaching effect of the sun's light attributed to it; produced by the chemical agencies of electricity and magnetism. Schönbein mentions, that in testing the atmosphere contained in a bottle

half filled with turpentine (oil) which had been exposed to sunlight and air, Ozone was manifested.

The decay, diseases and deaths of animals and plants destroy Ozone; the ammonical and sulphur gases of the atmosphere are oxidized by it, forming, thus, acids and salts: when in excess in the atmosphere, pulmonary diseases are rife. The method of forming the test paper for detecting its presence is thus given: "Iodide of potassium gr. i, starch grs. x, distilled water grs. cc; immerse a piece of bibulous paper in the solution, and then dry it for use; when taken out, there will be no change until dampened with water. Iodine must be in its *free* state, to give the blue test with a cold solution of starch. This is *usually* accomplished by a few drops of an acid, or a little chlorine water. In the *test* paper experiment, Ozone *plays the part of this acid*, or chlorine water; it disengages the iodine from the potassium, and uniting with the potassium, forms potassa, while the iodine unites with the starch, and forms the blue iodide of fecula. The depth of this blue will depend, of course, upon the quantity of iodine set at liberty, or in other words *upon the quantity of Ozone present.* The air coming from the sea gives a deep blue color; that passing over a city scarcely any. The current of air from a partly closed door, or window, will give a marked hue to the test paper.

We have given, thus, *without preparation,* or *classification*, the result of our examination into the best authorities on this subject; these authorities we have found surprisingly few, and we believe that we have consulted most of those at present accessible. We proceed now to consider the *relations* of Ozone to disease.

The prevalence of this principle in the atmosphere, and the prevalence of certain diseases, have been lately said to be relative; that the greater the quantity of one, the greater the malignity of the other, and conversely; thus the prevalence of pulmonary diseases and Ozone are in direct ratio, whilst the prevalence of Ozone and the malignity of malarious fevers are in an indirect ratio. This view has been assailed, on the ground that the generation of Ozone is not sufficient for it to become one of the controllers of disease; that on however large a scale it may be formed during the electrical commotions of the atmosphere, these do not occur sufficiently often to furnish this principle in quantities at all proportionate to the fulfilment of the object claimed. Again it is objected, that Ozone is most abundant in winter; at a time when electrical disturbances are notoriously infrequent. Its being generated by the action of "plants not excited by light," is claimed to be not well established, and even if so, that this sup-

ply would be but a small fraction of the amount necessary; its preparation by the oxidation of phosphorus under peculiar circumstances (from this being an artificial and complex process) is not at all regarded in the discussion. *So far*, we must confess that the objections to the views proposed are plausible and just; but we cannot lose sight of one of the facts stated, in our desultory enumeration of the experiments, viz: that the passage of electricity across the surface of water in a vessel, was found to generate this agent with great facility: This, to us, seems one of the most important facts ever disclosed to the profession. What gives polarity to the electric needle, but those vast belts of electricity constantly moving and encircling our globe; and though the magnetic equator is constantly *changing*, its existence is as clearly demonstrable as the most elementary of philosophy's laws. To falsify this, would be to pluck the well merited chaplet from the brows of some of the most noble of those who have achieved distinction in the fields of Science. Barlow, Brewster, Becquerel, and others, toiling here, have rendered their names immortal. This fact is beyond dispute, and who shall undertake to assert that one of the objects of this subtle fluid, *in its circle*, is *not* by its action on the *vast expanse of water which it spans*, to elaborate an agent, bringing purity to an atmosphere which, otherwise, would soon contain within itself the seeds of a general and inevitable death. We cannot but think this entirely true; and examine as we may, *there are facts* which seem sufficient to support the suggestion in its *minutest* particular. Let us compare the general existence of Ozone with some of these facts given. We find it to be the most rapid oxidizer known; that it is capable of exerting this action on all of those noisome gases and vapors which poison our atmosphere; that it is decomposed by heat; and that its excess is in winter. Is not the deduction plain? Ozone, it is reasonable to suppose, is formed nearly equally at all seasons of the year; when and where pestilential vapors, or gases, are greatest, is it not most largely consumed? These exhalations are, of course, greatest in summer, and at this time we have high solar heat, the one consuming by oxidation, the other by decomposition, is it not a necessary consequence that Ozone should be found "least" at this season of the year, and most in winter, when the causes of its consumption are in abeyance? Is there no reason why alluvial soils should be most unhealthy, as, from the gases and vapours which they evolve, consuming (with heat) the agent, given for the purification of the atmosphere around them? Can we not thus understand why epidemics have prevailed in regions before unvisited

by them? Thus, "Chemical agencies produce Ozone; decay, disease and death of animals and plants consume it." Imagine this balance still preserved, but with increased solar heat, and is not disease developed? Again, have solar heat no higher than usual, but the balance between the production and consumption of Ozone destroyed, will there not be disease? Lastly, as in the tropics, have intense solar heat, with the extreme of vegetable and animal decomposition producing mephidic exhalations, and *must* there not be those malignant forms of disease developed which so characterize those regions of the globe? Fortunately in that meridian, from the *coincidence of the electric circles*, there is no reason to believe that the agent is most abundantly formed; but again, the *least* disturbance in the balance, from the *causes there are at work*, must give rise to the fatal forms of Fever peculiar to such latitudes. These remarkable properties of this agent explain to us the cause of the marked mitigation of symptoms, so manifested in our Fevers on the supervention of a summer's storm, and its highly oxidizing properties may serve to make intelligible the existence of malarious Fevers in ferruginous localities, as in India, etc. In the one, the mephitic vapours and gases of the atmosphere are neutralized by the increased accession of Ozone; and in the other, this agent is consumed by its extreme affinity for all oxidizable bodies. Ozone, from the absence of heat and decreased exhalation which, as we have said, respectively decompose and consume it, is most abundant in the morning; *it forms an oxide with hydrogen*, most probably the *protoxide*, and hence the exhilarating effect of the air at this period of the day? By the test paper, we find the air from the sea containing an excess of Ozone. The reason of this is obvious and twofold, as here the agent is *most largely formed* and *least consumed*. The cheering and life-giving effect of sea air was known and advised by the earliest writers of the profession, who, ignorant of the cause, yet profited by the effect. Is not the cause such as we have suggested, the absence of the materies morbi with the exhilarating combination of oxygen with nitrogen? Chemically explained, the combination of one atom of Ozone with two of nitrogen, hydrogen being given off, would give us the protoxide of nitrogen. This can not be *too hypothetical;* for Faraday, the highest authority, tells us that Ozone is capable, in the atmosphere, of existing in an *allotropic* state.

"Ozone in excess is prone to the production of pulmonic disorders." It is a recognized fact, that Eastern winds in America, and Westerly winds in Europe, as coming immediately over the sea, have been usually attended and marked by this peculiar ef-

fect. Travellers in Africa tell us, that pleurisies, pneumonias, etc., mark the coincident occurrence of certain winds, and that the natives suffer almost *exclusively*. This naturally leads us to the *deduction of falsity* in that theory which advocates the pulmonary inception of malaria. Negroes, we know, suffer soonest and most (the remark above would substantiate this) from pulmonary affections, shewing thus their increased susceptibility to the action of those agents which interfere with the healthy condition of these organs. If the doctrine of the pulmonary inception of malaria be true, then this race should be the *most* susceptible; but facts notoriously prove the contrary. We are forced to make a reasonable deduction from the fact of Ozone being found, by test, in the atmosphere contained in "a bottle partly filled with turpentine, and exposed to the action of light and air."

It has long been supposed that the pines of our Southern country "exerted a chemical effect" upon the poison of malaria. This, for a long time vague, conjecture now finds, thus, an interesting corroboration. What more probable, than that Nature should, in the magnitude and magnificence of her laboratory, produce the same principle that we, in our miniature efforts, have boasted to originate; or what better calculated to impress us with the happiest conceptions of Omniscience, than that these stupendous agents, which produce it, should be placed just where this purifying element is most needed and consumed! On reference to Chemistry, we find the turpentine to be C^5, H^4, and with this, the *now* interesting remark, "Bottles in which rectified turpentine, not purposely rendered anhydrous, has been preserved, are often studded in the interior with groups of beautiful, colorless prysmatic crystals, which forms *spontaneously;* these crystals contain C^{20}, H^{16}, H^6, O^6," or four parts of turpentine, with the incidental H^6, O^6, *added.* It needs but a glance to see that we have here the *elements* of Ozone, though not in correct proportions; but we must again recollect Faraday's remark, that Ozone is only an allotropic condition of oxygen; "no change of matter, but change of *state.*" He instances this by phosphorus; heated up to 464° Fah., its *composition* remains the same, but its properties are *entirely changed;* it now requires a high temperature for combustion, but submitted again to a low red heat, it returns to its original state. Thus, then, any cause, (further exposure or chemical reaction) may change the *relative* proportion, or *state* of this new compound, thus forming Ozone, whilst *its actual composition in elements, remains the same.*

Be this explanation correct, or not, the *fact* of Ozone being thus formed is undoubted. The balmy influences of our so-called

terebinthinate atmosphere here find a reasonable and plausible explanation.

Lastly, we see that the dangerous accumulation of miasm is prevented by Ozone, whilst, conversely, the pernicious concentration of Ozone is corrected and controlled by miasm; that miasm is chiefly the cause of malarious fevers, and hence that any agent, capable of destroying it, bears by its proportionate presence and action, the closest "relation" to the existence and malignity of such fevers; that where it is in excess, fevers of this type are comparatively unknown, and where we have entirely the reverse, these fevers are malignant and often fatal.

Much more might be said on this interesting subject, but we have already far transgressed our limits, though we hope there has been shewn an intimate relation between the relative existence of this agent and that of those fevers which form a part of our dissertation. We can now but think that the variations of the magnetic meridian, as *shewn by the relative dip of the needle*, would, if compared with the existence of malarious fevers in various localities, and at various seasons, lead to the most interesting and important results; or, again, if the relative hue of the test paper be compared with the prevalence of various diseases, that a flood of light would be shed on the obscurity of this highly interesting and important agent.

Sargent's Minor Surgery, has been laid on our table by the Publishers, Messrs. BLANCHARD & LEA, through W. T. BERRY & Co.

We are averse to the indiscriminate and unmerited praise of books, so much the fashion of journalists now-a-days; but the little volume before us is so replete with practical information nowhere else to be found in such a close and condensed form, that we do not hesitate to advise young practitioners to procure it.

The book is devoted to that large class of "unconsidered trifles" to which the dignatories of schools cannot bend their lofty crowns; nevertheless, they are *trifles* upon the skillful performance of which, the success or failure of the young Physician often depends. It embraces the whole range of Minor Surgery, the style is close and perspicuous, the illustrations numerous and happy.

The work may be had at the Book-store of W. T. Berry & Co., Nashville, Tenn. A.

An Introduction to Practical Pharmacy, designated as a *Text-Book for the Student*, and as a guide to the Physician and Pharmaceutist, with many formulas and prescriptions. By EDWARD PARRISH, Graduate in Pharmacy, Member of the Philadelphia College of Pharmacy, and of the American Pharmaceutical Association, and Principal of the School of Practical Pharmacy, Philadelphia. With two hundred and forty-three illustrations.

This, as an elementary work, is calculated to be of much benefit to any one engaged in the study of Pharmacy or the practical duties of the Medical profession. The highest commendation we could probably give, would be to reiterate the fact that it is by Prof. Parrish. Those familiar with the reputation of the author will require none else. To such students, physicians and dispensers as are not acquainted with the just renown of the author, we commend the perusal of the volume. It is one of the publications of Lea & Blanchard, Philadelphia, and is for sale by W. T. Berry & Co., Nashville.

EDITORIAL NOTICES.

SMALL POX.

We have heard reports of the prevalence of small-pox in several localities this spring. A few cases have occurred at Fincastle, Campbell county, and also at Greenville. We have received the *Daily Express*, a newspaper published at Petersburg, Va., in which we find a letter addressed by Dr. Wm. P. Richardson, of Barhamsville, Kent co., Va., to the Vaccine Agent of the State of Virginia. It appears that a young man of that vicinity, being in Richmond, purchased a bed at auction, on which a small-pox patient had been confined, carried it home and slept on it. A few days afterwards he contracted the disease, and communicated it to some ten or twelve others. A hospital being provided for the safe keeping of all the patients, and to protect others, Dr. Richardson procured from the legally constituted Vaccine Agent of Virginia, a scab which was labelled *genuine* vaccine virus. This he introduced into the arms of several persons, in all of whom in the usual time, and without any communication with any small-pox patient, the most malignant, the confluent form of small-pox developed itself. The fact was the individuals were innoculated Some forty cases were thus produced. The agent states that he obtained the virus from Philadelphia, but this in our opinion does not exonerate the agent. From whom did he procure it? Was he a perfectly responsible man, and did he know the source whence it was obtained?

We take occasion to express a word of caution in the use of *vaccine* matter. We believe it to be a sure preventative of small-pox, and that its efficacy continues during the life-time of the individual. But it must be undoubtedly genuine, pure and uncontaminated. How often it has been made the medium of communicating loathsome eruptive diseases? How often has small-pox itself influenced the genuineness of the vaccine disease? Only that matter should be used which has been procured from a healthy child—free from both constitutional and specific taints—and

we might add only from those of this class in whom the vaccine disease has progressed in a regular manner, in whom it has been neither too highly inflamed, nor too feeble in its action.

Any constitutional taint renders the matter impure, and any specific disease existing at the time of insertion, can be propogated through it, and the man who would knowingly insert an impure matter into the arm of another is as guilty as if he had given him arsenic in his food. And so should the laws of the land regard it. Then the opprobrium which is now cast upon this protecting agent would be removed. It would perform its part as satisfactorily as in the days of Jenner. But while we admit the possibility of a mistake, especially when matter is received from second hands, (for it is with the first hands that all the blame rests if it prove impure,) we cannot conceive the smallness of the heart of that man who would expose to sale a bed on which a small-pox patient had lain. And where were the guardians of the city of Richmond, that such a thing was allowed? We hope there is some mistake in this report. R. O. C.

☞ We thank those of our subscribers who have remembered the Printer by so promptly forwarding the amount of their subscriptions, and who, in addition, have spoken words of commendation and of encouragement. They are like the words spoken of by Solomon, "apples of gold in vessels of silver."

EAST TENNESSEE MEDICAL SOCIETY.

We hope our Medical Brethren throughout East Tennessee will remember that the semi-annual meeting of the society will be held in this city *on the Second Wednesday of this month.*

From assurances given, we expect a full attendance. An address will be delivered by Dr. Pride, of Maryville, and a dissertation by Dr. Atlee, of Athens.

MEDICAL SOCIETY OF MONROE COUNTY, TENN.

We have received an abstract of the proceedings during the or-

ganization of this County Society, which we present below. We regret to learn that only two physicians of the county have refused to co-operate with the Society, taking a position adverse to the Rates of Medical Fees adopted by the society. As a hue and cry have been raised on account of medical fees being regulated, and in some few instances advanced, their opposition to the society may readily, by the public, be construed into a desire to curry favor by denouncing them. But unless professional preferment is based upon merit, no such popular breeze will continue sufficiently long to waft those who attempt to ride it, very far towards the haven of professional honor. What! do two medical men only in a whole county stand aloof from the Medical Association? Come, gentlemen, join the society, and our word for it, you will sleep better, feel happier, digest your food more readily, and gain more credit than by standing aloof.

An eminent physician of our acquaintance was once invited to unite in sustaining a State Medical Society, a committee waiting upon him for that purpose, and his reply was, "Doctors are not gregarious animals." This happened years ago; but what was our surprise and gratification during the last year to see in the proceedings the name of this same eminent man proposed and elected to membership in the same society. A change came over the spirit of his dream.

In this connection, it is desired that the East Tennessee Medical Society, which meets in this city on the second Wednesday of this (April) month, will be numerously attended.

MADISONVILLE, Jan. 7, 1856.

The Medical Society of Monroe county met at Dr. Tipton's office, pursuant to adjournment.

Present, Drs. Joseph Tipton, R. F. Cooke, Jas. M. Blair, Frank Bogart, Benj. Franklin, Thos. J. Young, and W. N. Bicknell. Absentees, Drs: B. M. Bayless and R. M. Evans.

The minutes of the last meeting read and approved.

The committee appointed to draft a constitution and by-laws, reported those of the East Tennessee Medical Society, with some slight amendment, which were adopted.

The society then ballotted for officers for the ensuing year, with the following result, viz:

Dr. Robert F. Cooke, *President.*

Drs. Joseph Tipton, and S. J. Young, *Vice Presidents.*

Dr. W. N. Bicknell, *Secretary and Treasurer.*

The committee appointed to draft a Rate of Medical Fees for this county, reported a list of charges, which were unanimously adopted, and the Secretary directed to have them printed, and each member of the society to have it framed and hung up in his office for public inspection.

On motion it was *Resolved*, That the President, at each regular meeting, shall appoint two members to furnish an original Essay upon some Medical subject, or report a case, at the subsequent meeting, subject to their own selection.

In accordance with the above, the President appointed Drs. Blair and Franklin to report at the next meeting.

Resolved, That we adopt the code of Medical Ethics of the American Medical Association, for the rule and government of the members of this society.

On motion, the Society adjourned to meet at the Masonic Hall, in Madisonville, on the 1st Monday in April next.

R. F. COOKE, *President.*

W. N. BICKNELL, *Sec'y.*

LETTER FROM A CORRESPONDENT.

Our friend A. will excuse us for publishing his excellent letter. There are so many good points in it that we cannot withhold it from the pages of our Journal:

M——, Feb. 27th, 1856.

DR. CURREY:—*Dear Sir:*—Dr. King is frequent in his calls upon me to prepare another paper for the Journal. I have made him so many promises, and afterwards failed to comply, that I am really becoming ashamed of myself; but that old axiom, which holds "that some things can be done as well as others," is both true and false, and admits of as much proof on the one side as the other. In this particular case, I find myself on that "other side," where I fear I shall have to remain for some time yet, unless you or some other good friend should put me in the way to

pay debts without annoyance. Now, sir, just suppose a case. The Doctor sits down with pen in hand, to prepare a paper for the Journal—the case (if it be a case) is singularly important and interesting—the importance and interest of which he wishes to portray in such a manner as to attract the attention of his professional brethren. A slight tap is heard at the door. Come in! "Good morning, Doctor; Mr. A. requested me to say to you that he is very much in need of that fifty dollars you owe him, and would be exceedingly glad if you could accommodate him by paying the debt; he would by no means call upon you, but for the urgent necessity of the case. Should you fail to comply, he will be put to great inconvenience." I have not the money by me, sir, and cannot pay him this evening. "But, Doctor, can't you borrow it for him? I assure you he is in distress." I'll try. The pen is thrown down, the subject forgotten, and "Can you lend me fifty dollars for a few days?" is the enquiry made successively (not successfully) of about a dozen *friends*, all of whom it would greatly please to help the poor fellow, but they, too, are just out. So the matter goes, until every thought of cases and Journals is knocked into the middle of next week, or, as the printers would say, into *pi*.

If you are in debt, (and I suppose you are, for all good Doctors owe money,) you can certainly appreciate the difficulties in the way, and excuse a non-compliance with promises, even though more numerous than those made to King.

But to be more serious, I hope to be able sometime during the spring to send you something—for what No. of the Journal, though, I cannot now say.

I was pleased with your remarks relative to a school at Knoxville. I think the location a good one. Should you succeed in eliciting an interest in it from the citizens, the project will succeed. Knoxville is destined to be a place of considerable size. Having no advantages in a commercial point of view, it must necessarily look to other appliances, and no enterprise in my judgment would surpass that of a well organized Medical School, in promoting its growth. But Doctors ought not to be called upon to purchase grounds or build houses. Any Physician qualified to

fill a chair in a Medical School has always at hand a practice worth more to him than the paltry sum accruing from students, particularly for the first few years. Property-holders become the beneficiaries of such enterprises, and to them should be allotted the preparatory expenses, and to them alone. Let your citizens raise the money, and present you with the institution free from debt or other incumbrances. With an arrangement of this character, I have no doubt that in five years you will have a class of not less than two hundred students, who will bring to your city at least seventy-five thousand dollars annually. Out of this amount, the Professor would receive not more than fifteen thousand dollars. The balance would be divided amongst the citizens of the town. Is not this a sufficient inducement for an outlay, from the people of Knoxville? The great secret of the failures, which so often attend projects of this character, exists in the want of local aids, and the consequent liabilities which have to be incurred by those selected to teach. But as I commenced this letter alone for the purpose of excusing myself for neglected promises, I will close it, with the hope that you will pardon me for uncalled for suggestions, or unnecessary intermeddling in matters about which I am not personally interested. Write to me.

Respectfully, A.

Yes, Doctor A., we can enter fully into all your feelings, on the subject of debt. And have you never noticed that those from whom you have sought an accommodation, "just for a few days," have been, at some time or other benefitted by your medical or surgical skill. But as it is nobody but a poor Doctor, who is dependent upon his practice, and makes no show of wordly goods, who wants an accommodation, the world is lothe to give it. Have you never reflected upon the ingratitude of man towards our sacrificing profession? And this is more apparent when we seek claims of those who are justly indebted to us for services rendered. Take the medical profession generally, and there is no other class of men who labor more for the public good, and receive less than they do. It matters not when he is called upon, by night or day, in summer or winter, rain or shine, sick or well, he must go to rich and poor, and we feel proud of the profession of our

choice when we say that it affords them an inward gratification to have it in their power to administer relief. But Doctors cannot live alone upon the air they breathe. They need the substantials of life as well as others, and yet there are those who never care to see you unless some members of their family are prostrate with sickness. And then there is such grumbling and frowning when you present your bill; it is regarded as so enormously high, estimating your services by the physical labor you have performed. Never is the time devoted by the Physician to preparation for this work esteemed anything. His constant study, his care and anxiety for those under his treatment, and his responsibility, all are nothing. His mid-night labors, while others are sleeping, his exposure to cold and rain, during all seasons and at all times, his disinterested watchfulness at the bed-side of the poverty-stricken widow, of whom the world is not worthy—all these labors are nothing. But he must submit to a deduction of his bill, or he is threatened, by intimation, if not directly, with a loss of patronage. And still the Physician labors hopefully. He knows the dignity of his profession, and if a religious man he feels its sacredness, and hence he turns not a deaf ear ever to the calls of humanity, proceed they from what source they may. He is ready to weep with those that weep, and rejoice with those that rejoice. For nothing can excite a greater degree of gratification within him than to know that he has been the instrument of cheering the heart of an affectionate husband, or drying the tears of a watchful wife, or rejoicing the hearts of fond and doting parents, at the restoration to health of their loved ones. But should disease baffle all his skill, and his arms lie powerless by him, he has a heart to feel for others' woes, and a hand to extend, when needed, in alleviating other ills than those of the heart. This is the dignity of our noble profession, and let its rewards be as poor as they may in this life, yet will we labor hopefully, trustingly.

Viewed in another light, there is a wide difference between our profession and other callings. The merchants who sell you clothing to protect you in your labors of love, the bookseller from whom you have purchased a few of the latest and most approved volumes, to keep you informed as to the progress of the science,

the druggist who has furnished you with medicines to administer to the sick, the butcher and the gardener from whom you have obtained provisions to keep soul and body together, and the farmer who has filled your crib and hay-loft with provender for your horse, to keep him in proper trim for your practice, all expect their pay at the proper time, and if not promptly and punctually met, will intimate that they sell on credit only to punctual men. And yet your claims for medical services are outstanding. No one feels it his duty to come forward to your relief. To press your claims would drive off patrons, and not to pay your debts, your credit is lost. What does the poor Doctor, with thousands due him? He seeks a loan from this and from that friend, but he seeks in vain. What does he in this extremity? He still labors hopefully, trustingly, consoling himself that there is a better day coming. But alas how often is it that that better day is only reached when the grave covers his mortal remains, and his noble spirit has taken its flight to a land of rest, where the wicked cease from troubling, and the weary are at rest. R. O. C.

THE SPIRIT OF THE HOME JOURNALS.

Southern Medical and Surgical Journal.—The March No. of this Journal contains an excellent article on the *Diagnosis of Dislocation of Shoulder Joint* by Prof. L. A. Dugas. The writer proposes a new means of arriving at a correct Diagnosis; thus, if the fingers of the injured limb can be placed (by the patient or surgeon) upon the sound shoulder, while the elbow touches the thorax, there can be no dislocation; and if this *cannot* be done, there *must* be a dislocation.

Dr. Rivers, of Georgia, reports a case of *Scrotal Hernia*, which after being reduced, on account of the imprudence of the patient, resulted in Peritonitis, the inflammation extending to the testicles, and suppuration ensuing, and the patient recovered.

American Journal of Pharmacy, for March.—Dr. Ruschenberger, U. S. N., describes the Quick Silver Mines in Santa Clara county, California. The yield of these mines is about 30,000 flasks annually. Each flask contains 75 pounds, hence the yield is 2,550,000 pounds. Dr. R. describes the process of refining. By a series of experiments made upon the waste water contained in the conduit, and which had served to condense the mercury at the termination of the series of chambers, he found it to contain mercury in a minute mechanical suspension. This waste water he found to possess sp. gr. 1.002.

Dr. Plummer cautions against impure *Soda Water*, obtained from new or old founts.

J. M. Maisch proposes a new method for manufacturing mercurial ointment. He passes the mercury through Chamois leather, and secures a minute division of the metal. In this state he rubs it in a mixture of fat 2 oz. and suet 2 oz., kept warm.

Prof. Proctor gives formula for the preparation of the *Alcoholic Extract of Wild Cherry bark*, and of the wine of the same bark.

Mr. Maisch speaks truly when he says:

"To put down quackery, to expose it and reduce it to nothing,

requires the efforts of all true-hearted men, and especially of physicians and pharmacians. We know it cannot be overcome all at once, but must fall by degrees, and we have no doubt it will. When questioned about the efficacy of quack medicines, we should not hesitate to state our opinion of nostrums in general, to refuse any sort of recommendation above—some are said to have derived benefit from it—but to recommend the afflicted to seek the advice of some physician in whose knowledge and skill we can place confidence. This, we think, should be the beginning: if necessary, an explanation why the same medicines cannot answer for so many diseases or always for the same disease, which is modified by the constitution, the sex, habits, manner of living, &c. Declining on the part of apothecaries to keep quack medicines for sale, has, in most cases, been rewarded by the entire confidence of the practising physician and a corresponding increase of the prescription—the legitimate pharmaceutical business. So much we are assured of, that if medical societies would take a bold stand against nostrums of any sort, and act in conjunction with the various pharmaceutical societies, to remedy this evil would then be easier. As yet the voices in opposition to quackery, and especially the nostrum quackery, are thinly scattered throughout the country; but seldom the editor of a newspaper ventures to publish an article opposed to it. The harmonious action of the practising physician and the dispensing pharmaceutist is necessary, to be productive of much good; their recompense would be the increased confidence of the public."

New Hœmostatic.—Dr. Butler, of Ohio, recommends a scruple of Tannic acid in an ounce of elixir of vitriol, in 15 drop doses, to be given in menorrhagia, etc.

Atlanta Medical and Surgical Journal, March.—Dr. Hillyer, in his *Essay on Croup* alludes to the successful administration of powdered alum as an emetic. Dr. C. D. Meigs gives it in spoonfull doses, mixed with honey or syrup, and repeats every twenty minutes. It succeeds when tartar emetic fails.

Dr. C. W. Ashby recommends *Stramonium* in Dysmennorrhea. Dr. A. gives Dr. Eberle credit for the suggestion. One-eighth of a grain of Clutterbuck's ext. of stramonium is to be given three times daily, commencing some four or six days previous to the expected return of the menses. It is best associated with anodynes, purgatives and hot applications.

Uses of Chloroform.—To the Atlanta Medical Society, seve-

ral statements were made respecting the use of chloroform in various diseases. Dr. Dowall used it successfully in a case of Eclampsia, 30 drops being given every half hour in a table-spoonful of water, till the convulsions ceased. Dr. Logan had used it with decided advantage as a local application in a case of retention of urine. In a case of flatulent colic, Dr. Hillyer used it with success in 30 drop doses.

The Monthly Sthethoscope and Medical Reporter, March.—Dr. William B. Lewis reports *the case of Abscess* located just above and behind the anterior superior spinous process of the ilium, which when opened discharged five pints of pure pus. It had been discharging previously through the bowels. The patient recovered under a tonic course of treatment.

Oil of Turpentine in Erysipelas is regarded by Dr. B. F. Watkins as a valuable remedy. He paints the erysipelatous surface, and finds the relief instantaneously.

A Case of Immoderate Use of Cold Water is reported by Dr. Atkinson, the individual drinking from *eight to twelve gallons* during the day, and from *four to six* at night. He enjoyed good health.

A Medical Pirate is one who through other persons, *perhaps a wife or sister*, undermines the practice of his medical brethren for the purpose of having himself promoted to favor. The way to treat all such is with scorn and contempt.

American Medical Gazette, March.—In the article on *European Practitioners No.* 1, Sir James Clark, Physician to the English Queen, receives at the hands of J. a severe castigation. He shows him off in no enviable light. Whilst at the acme of his glory he suddenly fell on account of his outrageous opinion in the case of Lady Flora Hastings. This opinion caused the death of this innocent and estimable woman, her aged and heart-broken mother soon following her. He was afterwards designated as "Lady Flora's *murderer*."

In *Asphyxia*, resulting from chloroform, convulsions, &c., respiration may be restored by applying a napkin, for a moment, wet with boiling water, to the chest, and repeated at such intervals as to increase redness of the skin. (In the case of a negro

boy, aged 10 years, who had been in a convulsion for several hours, we applied a tin cup full of boiling water quickly to the crown of the head, and immediate restoration was the consequence. Of course we had a large blister as the result. (Ed.)

Read the following *dark picture* of the effects of a single error. It is extracted from Dr. Francis' report to the Governors of the Alms House, New York, on Prostitution and Syphilis.

"A young man has imbibed the contagion—it has become constitutional. After a few weeks or months perhaps, of treatment, the visible signs of the disease no longer torment him. He has contracted a matrimonial alliance, and soon marries a healthy and virtuous woman. He flatters himself that he is cured. A few months suffice to give him painful proofs of his error, for then his growing hopes of paternity are suddenly blasted. Instead of the child of his hopes, he sees a shriveled and leprous corpse. This is but the first in a series of similar misfortunes. He has poisoned the fruit of his loins, and again and again, and still it falls withered and dead. At length nature seems to have triumphed over this foe to domestic happiness, and the parents' hearts are gladdened by the prospect of a living child. Their joy is short-lived. The child is feeble and sickly, and in a few days or weeks another death is added to the penance-list of the humbled and grieving father.

This mournful story will need no essential change in the narration, should the poison of impure intercourse, legitimate or illicit, linger in the veins of the mother.

A child of such connection may be born in apparent health, but before six months have passed, some one of the numerous forms of infantile Syphilis will be likely to appear and threaten its life. In the contest which follows between disease and the treatment, the physician is commonly victorious, but the contest is in many cases protracted, and often is to be renewed again and again. And after all, it is not believed that children thus tainted at their birth often grow up and acquire that degree of health and vigor which is popularly ascribed to a *good constitution*.

These are facts familiar to physicians practising in large towns. But the history of inherited Syphilis is not yet complete. If, in the case just recited, the wife escaped contamination from her husband and from her unborn child, yet the sad consequences of that husband's folly are not yet exhausted. The tainted child, now a sickly nursling at her breast, has a venom in its ulcerated lips and throat, which can inoculate the mother with its own loathsome poison, while it draws its sustenance from the sacred foun-

tain of infantile life. But this is not all. These little innocents sometimes spread their disease through the whole circle of those who bestow on them their care and kindness. The utmost caution and cleanliness cannot always save those who dress their poisonous sores. The contagion spreads sometimes through the use of the same spoon, the same linen, and even by that highest token of affection, a kiss. It has been known that a single diseased child has contaminated its mother; a hired nurse; and through that nurse, the nurse's child; and in addition to these, the husband's mother, and the mother's sister. Such are sometimes the weighty consequences of a single error."

RECORD OF MEDICAL SCIENCES.

Curative Treatment of Prolapsus Uteri, by the local application of Tannin. By Charles A. Budd, M.D., Fellow of the New York Academy of Medicine.—The many and varied forms of uterine disease resulting from an injudicious use of pessaries, as well as the irreparable damage done by means of cauteries, either actual or potential, or by extirpation of portions of mucous membranes, which have for their object the diminution of the capacity of the vagina with a view of curing prolapsus, have led me to add my testimony in favor of a practice first recommended by Prof. B. F. Barker, of this city. I allude to the application of lint soaked in a saturated solution of tannin; and if the perusal of the following cases, selected from a variety which have come under my observation, will induce a trial of the treatment alluded to, I feel confident that in all cases to which it is applicable, the result will be equally gratifying. There are, to be sure, certain abnormal conditions in which it is not applicable, as, for example, a very straight sacrum, or a loss of substance in the perineum due to laceration or other causes; or if there be any pathological condition of the cervix, it must be removed by appropriate treatment; and then, if the prolapsus continue, the utility, I may say infallibility, of the method alluded to, become apparent. But in simple cases of prolapsus, whether incipient, partial, or complete, depending upon a mere relaxation of the uterine supports, I have never known it to fail where the treatment has been faithfully persevered in. The manner recommended by Prof. B., and the one I have followed, in its principal details, is as follows: From a double thickness of lint a triangular portion is cut out, of a sufficient size to fill the capacity of the vagina when rolled up so as to form a cone, near the apex of which is attached a piece of string to facilitate withdrawal. The patient being placed upon her back, with the hips slightly elevated, the uterus is replaced in situ, and the lint, soaked in a saturated solution of tannin, is applied with its apex downward and its base immediately in contact with the os tincæ. This is repeated once in twenty-four hours, for a period of time in accordance with the extent of the displacement. I have usually found a daily application for a period of about a month, to be sufficient to perfect a cure. During this time, and subsequently, constipation must be rigidly guarded against, and the state of the general health attend-

ed to. The vagina soon begins to acquire its wonted tonicity and contractility, and the lint is consequently obliged gradually to be lessened in quantity; the strain being taken off the round ligaments, also allows them to return to their normal condition. The following cases exemplify the admirable effects of this plan of treatment.

Case I.—Mrs. G., æt. 24 years, the mother of two children, the youngest fifteen months of age, had always enjoyed good health until the birth of her last child. The placenta in this last accouchement (I having attended her in both) was retained over three hours, in consequence of irregular uterine contractions. She has been complaining ever since of pain in the lumbo-sacral region, with bearing-down pains in the hypogastrium; great constipation, with vesical and rectal tenesmus; and a sensation of faintness after an evacuation, leucorrhœa. &c., &c. Upon examination, I found the cervix protruding at the vulva, extensive ulceration extending into the canal of the cervix, inflammation of the posterior wall of the uterus, and enlargement of the organ itself, its long diameter measuring 4½ inches. After three months' treatment, these conditions, save the prolapsus, were all removed, the applications to the cervix having been made weekly, and without the aid of a speculum, and the uterus at this time measuring less than three inches in its long axis. The treatment consisting of the lint and tannin, was soon after commenced; and in about three weeks' time she was enabled to resume her ordinary duties. She is now four months pregnant with her third child, all treatment having been suspended about six months ago.

Case II.—Mrs. S. œt. 20 years, the mother of one child aged two years, applied to me in July, 1854, suffering from all the symptoms of uterine prolapsus. She had aborted with a three months' fœtus about a month previous, but had been complaining for two years before. An examination revealed incipient prolapsus, the cervix lying on the floor of the perineum, and slight epithelial abrasion of its mucous surface. Two applications of nitrate of silver removed this; and the use, for ten days, of the lint and tannin, effected a pure cure.

Case III.—Mrs. G., æt. 69 years, a widow, the mother of five children, the youngest sixteen years of age. Had ceased menstruating about ten years previous. She stated to me that upon using the slightest exertion, such as lifting or straining at defecation, her womb would entirely protrude from the vulva. She had used a variety of abdominal supporters, and had attempted on several occasions to wear pessaries of different kinds, and at that time was wearing constantly a T. bandage. Upon exami-

nation I found the uterus just within the vulva; and requesting her to lift a chair, the whole organ was protruded, dragging with it the posterior wall of the bladder; it was perfectly healthy in appearance, though somewhat atrophied. I commenced the treatment with the lint and tannin, interdicting active exercise, and in six weeks ceased making any applications. She gradually resumed her ordinary duties, and is now (some two years since) perfectly recovered, and is considered a very active old lady. She has not had the slightest disposition to a return of the displacement, and enjoys excellent health.

I have here given an example of the three different degrees of prolapsus—incipient, partial and complete—illustrating the curability of this treatment in each. I could, if it were desirable, cite many others which have been under my observation, and which have resulted, without a single exception, in a perfect and complete restoration.—*N. Y. Med. Times.*

☞*Comparative Value of the Different Hœmostatic Agents.*—A correspondent sends us the following translation, which we publish as conveying valuable information upon an important subject.—*Boston Med. and Surg. Journal.*

The Gazette des Hopitaux of Sept. 29th, in an article on the comparative value of different substances as means of arresting hæmoptysis, after remarking that bleeding for this purpose has deservedly fallen into general disfavor, alluded to the clinical researches of Dr. Aran, published in the Bulletin Gén. de Thérapeutique, and gives a *rèsumè* of the interesting and valuable results to which he had arrived. We translate passages which seem to us of considerable value.

M. Aran has successively tried agents belonging to the class of hæmostatics, properly so-called, such as resinous substances, the ergot of rye and common salt; then astringents—acetate of lead, alum, *eau de Rabel*, tannin, and gallic acid; nauseants and emetics—ipecac, tartar emetic, veratrine; and sedatives of the circulation—nitre and digitalis.

Of the agents belonging to the first group, hæmostatic proper, the essence of turpentine has seemed to M. Aran especially to deserve the attention of physicians. He has prescribed it pure, in doses of from ten to thirty drops, in a glass of water, or made up into a bolus with magnesia, and taken enveloped in moistened wafer (*pain à chanter.*) Generally within a few hours after the patient commences taking it, there is a very marked diminution in the amount of the hæmorrhage, and in twenty-four or thirty-six hours at the most, it is reduced to a very small quantity or

entirely ceases. On the other hand, M. Aran is convinced, as many English and German physicians have already proved, that the essence of turpentine is less suitable in hæmoptysis, with a tendency to inflammatory action within the chest, a febrile movement, or when it occurs in young or rather plethoric subjects, than when it happens in debilitated, cachectic subjects, with characters of *passivity* or atony.

Ergot of rye and the ergotine of M. Bonjean, have shown much less efficacy against hæmoptysis than essence of turpentine. The former, even, when given in a very large dose, has seemed to exert only the most moderate influence upon the hemorrhage.

The same is not the case with chloride of sodium or common salt, which has been proved to possess an undoubted efficacy in doses of from sixty to one hundred and fifty grains taken in the course of a few hours in solution, or in the form of powder. It is particularly deserving of recommendation in such cases, as it is constantly at hand.

Among the astringents, M. Aran has found none worthy of confidence except tannin and gallic acid. Gallic acid seems to him preferable to tannin, as, with the same styptic properties, it has not the same drying action upon the tissues, and does not produce the obstinate constipation which occurs when the latter is employed. The medium dose of gallic acid, as he administered it, was from ten to twelve grains in twenty-four hours, in powders of two grains each, given at intervals of two hours.

M. Aran acknowledges the power of nauseants and emetics to arrest hæmoptysis, such as tartar emetic, ipecac and veratrine. With regard to the first two this property has been known for a long time. As for veratrine, in three cases in which it has been prescribed, the hæmoptysis was arrested as by enchantment as soon as nausea and vomiting took place. These agents would deserve, then, to be placed in the first rank of hæmostatics, if there were not others of equal efficacy, which do not produce nausea and vomiting, effects which are always painful or disagreeable to the patient.

Nitre and digitalis have been equally, and with good reason, extolled in this case by the name of sedatives to the circulatory system. Following the example of Schmidtmann, who conceived the idea of combining sea salt with digitalis to combat hæmoptysis, M. Aran, for the same purpose, combined digitalis and nitre. This mixture, it appears, produced very remarkable results.

In ordinary cases he gave in the course of twenty-four hours four grains and a half of digitalis and twenty-three grains of nitre in four powders. But when the hemorrhage was very pro-

fuse the quantity of nitre was carried as high as thirty-eight grains, and that of digitalis to eight or even twelve grains; in some very grave cases the quantity of digitalis given was carried to twenty-three grains, and of nitre to sixty grains. A remarkable circumstance noticed was, that when these remedies were given in this quantity the system was not affected in any unfavorable manner; the pulse did not suddenly abate in frequency, nor was there very abundant diuresis. On the other hand, the effect upon the hæmoptysis was most marked; in a few hours the flow of blood was considerably reduced, and often after twenty-four or thirty-six hours there remained only a little bloody expectoration. The diminution of the hemorrhage was generally accompanied by a great calm. Nevertheless M. Aran observed that never, after the administration of turpentine or gallic acid.

M. Aran sums up his opinion of the respective value of the different agents in question, in the following words:—In profuse hæmoptysis, but not immediately threatening life, the physician may take his choice of either of the preceding remedies. In very profuse hæmoptysis, on the contrary, where it is necessary to arrest the bleeding as soon as possible, and by means the least likely to depress the system, the physician cannot trust the tardy remedies. Neither the ergot, nor sugar of lead, nor *eau de Rabel*, nor alum, nor rhatany, &c., will be equal to the emergency. Only turpentine, gallic acid in a large dose, salt, nitre combined with digitalis, can be employed with success; but the necessity of proportioning the dose of the medicine to the intensity of the hemorrhage, in administering the chloride of sodium, but particularly the nitre and digitalis, is productive of great inconvenience; the danger of too great a depression from too large a dose, or from too long a continuance of the remedy.

"It is then to gallic acid and to turpentine that I give the preference in these grave cases; yet, under the apprehension of their insufficiency, I do not think the physician should limit himself to their use. It is under such circumstances that bandages applied to the limbs, which are very useful in other kinds of hemorrhage, and ice applied to the chest, have saved the life that was in danger, by stopping the hemorrhage for the moment, and allowing the internal remedies to complete the work." A.

Tannic Acid a Remedy for Chilblains. By Prof. Berthold.—The extract obtained by boiling 1½ oz. of pounded nut-galls with 0.5 lb. of rain-water, has an excellent action upon chilblains. The decoction may be employed as a bath, or laid upon the swellings by means of rags. The itching and burning disappear in

two or three days. In old cases the remedy must be continued longer. Oak-bark may also be employed; a mixture of 1 lb. of oak-bark and 2 lbs of water being applied as a poultice. This remedy must not be used with broken or festering chilblains.—*London Pharm. Jour.*

Emulsion of Chloroform.—M. G. Daunecy, Pharmacien of Bordeaux, recommends the following potion as the most convevenient way of administering chloroform internally, viz:

Take of Pure Chloroform	half a drachm
Oil of sweet almonds	four drachms
Powdered Gum Arabiac	two drachms
Syrup of Orange Flower	fifteen drachms
Distilled water	thirty drachms.

M. Daunecy observes that when the chloroform is not pure, and contains alcohol, it forms a cloudy mixture with the almond oil. Sulphuric ether is the only substance that is an exception to this rule.

Compound Tonic Syrup of Orange Peel as an Anti-Dyspeptic. By M. Bourgeois.

Take of Bitter orange peel	16 drachms
Quassia	9 drachms
Catechu, bruised	3 drachms
Gum Arabic	25 drachms.

Infuse the three first substances in 130 drachms of boiling water; dissolve the gum in 50 drachms of water. Then mix the infusion with the dissolved gas, and make syrup with 300 drachms of sugar.

Ferruginous Pills of Er. Bertronneau, according to M. Gardis, Pharmacien of Villiers le Bel.

Take of Iron reduced by hydrogen	250 grains
Sulphate of quinia	15 "
Powdered Ginger	15 "
Extract of Yellow Bark	45 "
Compound Extract of Rhubarb	43 "
Socotrine aloes in powder	8 "
Syrup of Saffron	1 drachm.
Simple syrup q. s.	

Make one hundred pills, which should be preserved in a square or cylindrical bottles of blue glass, hermetically sealed.

The dose is one in the morning early, and one at bed time;

after four days, take two in the morning and two at night, and continue doing so for some time. They do not constipate but act as a slight laxative.—*Repertoire de Pharmacie.*

Quick Process for Mercurial Ointment.—M. Bernier, Pharmaceutist of Reuwez (Ardenes,) recommends the following process. Take one-third of the lard to be used for the ointment, heat it in a skillet of copper till it commences to disengage vapors and burn, and then pour it into an earthen vessel, and place it in the cellar for ten or fifteen days. Use this lard to extinguish the mercury, employing an iron mortar, and observing to add the mercury gradually as each addition disappears. The mercury is soon perfectly extinguished when the rest of the lard is incorporated thoroughly, the whole operation requiring but an hour.—*Repertoire de Pharmacie.*

Anti-Gout Wine of Dr. Anduran.

Take of Colchicum bulbs collected at the proper season	30	parts.
Leaves of the Ash Tree	30	"
Malaga Wine	500	"
Macerate for eight days and filter, then add		
Tincture of Aconite	8	parts.
Tincture of Digitalis	5	"

Take a teaspoonful morning and evening in a cup of tea for gout or articular rheumatism.—*Repertoire de Pharmacie.*

Spigelia Jelly.—This elegant formula we find in the Annuaire de Therapeutique for 1855, taken from the Gazette Med. de Liege. It is recommended by M. Bonnewin as the most agreeable form of administering this favorite anthelmintic. ℞. Pulv. spigelia, ʒviij.; Corsica moss, ʒiv.; boiled in 16 ounces of rain-water, until it s reduced to 10 ounces. The decoction should then be decanted into a sauce-pan containing 2½ ounces of white sugar, and again boiled down, carefully stirring with a silver spoon, until 4 ounces of jelly are obtained. It then should be strained through a seive into a jar containing two drops of the essence of citron or caraway. This jelly is a very active anthelmitnic, and so agreeable that children will seek for it with avidity. If kept in a cool place, it will remain good for some time, and its flavor may be still more improved by substituting for the sugar either the syrup of gooseberries or mulberries.—*Virginia Medical and Surgical Journal.*

Elder Bark in Epilepsy.—Take the branches from a young

tree, strip off the outside bark, and scrape the inner bark from the stem for use. Infuse one ounce in six ounces of water, forty-eight hours. To be taken fasting, one-half at a time, the other half in a quarter of an hour; and repeated every six or eight days for two or three months. Vomiting and purging are often produced, and sometimes vertigo, but never to an alarming or injurious extent. Some obstinate cases of epilepsy have been relieved and cured by this remedy, and several which had their origin in the vice of masturbation.—*Ibid.*

On the Use of Liquid Caoutchouc.—The utility of collodion, as an impermeable plaster in various cutaneous affections, is very generally acknowledged. It has, however, some disadvantages in certain cases, arising from its inelasticity, which makes its extensive application inconvenient, or inadmissable. In such cases, thin laminæ of *gutta percha*, oil silk, or adhesive plaster, are generally used. About a year since, I was presented by Mr. S. T. Armstrong with a bottle of the milk of *Hevea* or Caoutchoc in the liquid form in which it exudes from the tree. It is preserved in that state by the addition of a small proportion of free ammonia, and is now introduced as an article of commerce for manufacturing purposes, and, from my experience with it, I am compelled to call the attention of the profession to it, as a most useful contribution to our *materia medica.* It is of the color and consistency of pure milk, (if my recollections do not deceive me) but becomes transparent as soon as dry. Owing to its great elasticity, it does not contract so violently as the collodion, it adheres closely to the skin, and allows entire freedom of motion and application to any extent. In burns it has an advantage over everything I have ever used, as also in erysipelas. An acquaintance with it by surgeons will lead, I do not doubt, to many valuable improvements in surgical appliances.—*New York Journal of Medicine.*

Hospitals—a Historical Sketch.—The following sketch of the early history of hospitals we extract from an interesting address by Joseph M. Smith, M.D., delivered on the occasion of the inauguration of the New South Building of the New York Hospital.—[*Ed. Med. and Surg. Reporter.*

"The institution and multiplication of hospitals are among the most striking evidences of the progress of civilization, and of the benevolent and noble spirit of those engaged in their support and management. Their origin is distinctly traceable to the enlightening and humanizing influences of Christianity. Among

the ancient Greeks and Romans hospitals were unknown. The poor were allowed to suffer and die under such shelters as might fall in their way. The wounded in battle had to retreat where they could collectively receive medical care. The temples were the only places where the sick congregated, not for the purpose of admission as resident patients, but for the purpose of obtaining a knowledge of the remedies which were there recorded as having been curative in cases similar to their own.

"In their general character, as sources of medical relief, the temples of heathen antiquity were more nearly allied to modern dispensaries than to hospitals. It is said by a distinguished medical scholar, Professor Bartlett, 'The sick who visited the temples for relief, were subjected, under religious forms, to a preparatory regimen, consisting of prolonged abstinence, or a rigorous diet, and various purifying ablutions and inunctions of the body. After these preliminaries, a night was passed in the temples, and the patients subjected to the treatment ordered by the Asclepiades. A certain number of the patients who had been cured, left in the temples votive tablets, grateful offerings to the gods, containing brief records of their diseases and their cure.' Strabo says, 'the Temple of Epidaurus is always full of the sick, and of the tablets on which the treatment is inscribed; and it is the same at Cos, and at Tricca.'

The epoch of the institution of hospitals is usually referred to the sixth century, or the reign of Justinian. They seem to have been for a long time connected with monasteries, and under the direction of those in whom were united the medical and clerical characters. But the greatest number of infirmaries have arisen since the Reformation; and in many instances, the edifices now used as hospitals were formerly conventual establishments. Hundreds of years elapsed before institutions were founded for the special and exclusive benefit of the sick and poor. Indeed, as matter of history, hospitals scarcely deserve to be mentioned before the twelfth century, in which age, St. Bartholomew's, in London, was founded by Henry I, though subsequently endowed by Henry VIII., and rebuilt in the reign of George II. Of the few of any note established in the fifteenth century was Trinity Hospital, a small institution at Edinburgh. After this period the number rapidly increased. Among those which sprang up as general or special infirmaries, and which are the most celebrated and best known to us, in the sixteenth century, were St. Thomas's, of London, and the enlargement of the Hôtel Dieu, at Paris, one of the oldest in Europe, dating back as far as the seventh century; in the seventeenth century, were the Bethleham,

St. Louis, La Pitié, La Charité, La Salpétriére; in the eighteenth century, St. George's, the London, Guy's, Middlesex, Locke, St. Luke's, Royal Infirmary of Edinburgh, Des Enfans Malades, and Des Vénériens. There were also many others founded in metropolitan, provincial, and colonial situations; and among these last was one in the colony and city of New York. In the present century infirmaries have so multiplied, that there are few places, especially in maritime countries, having a city population, in which there is not one or more established with chartered rights, or under the management of a municipal government."

Means of Counteracting the Effects of Chloroform.—In the *Gazette des Hôpitaux* of September, we find a notice of a session of the Society of Practical Medicine, containing a report by M. Ferrier upon a communication of M. Ludger Lallemant on the relative value of different agents to neutralize the deadly effects of chloroform.

After detailing the usual phenomena of anæsthesia as exhibited in man and the lower animals, the report continues:

"Among the means of opposing the poisonous effects of chloroform, experimentists have tried inflation of the lungs with pure oxygen and also with atmospheric air, electricity, irritation of the phrenic nerves, and stimulating the pharnyx with caustic ammonia.

"The success obtained by inflating with oxygen, has been equalled by the happy results obtained by the use of atmospheric air alone; and authors who have tried with success azote, are convinced that the result should be attributed rather to the irritating action of the gas brought into contact with the walls of the bronchial tubes than to any specific effect in the air-cells. They have therefore given the preference to inflation with atmospheric air as the most simple, and of sufficiently easy application by means of a gum-elastic tube provided with a mouth-piece; which, in experiments with dogs, has been introduced into the larnyx, or simply into the back part of the mouth in rabbits. The inflation should always be made to alternate with pressure regularly applied to the chest.

"Electricity proposed by MM. Jobert and Abeille has not succeeded in the hands of experimenters. Irritation of the phrenic nerves, suggested by M. Duchenne, of Boulogne, having for its object to restore the regular action of the intercostal muscles, has appeared, on the other hand, to be equally successful with the inflations. The use of caustic ammonia, according to the process of M. J. Galrin, has failed.

"Inflation, as the means of bringing to life the subjects of an excessive employment of anæsthetics, has been of no benefit except in the cases where it has been used immediately after the cessation of respiration, rarely after the heart has ceased to beat. It is necessary also that inflation should be continued with perseverance and energy, until the normal and spontaneous movements of respiration are fully established.

"It has been remarked, also, that under the influence of anæsthesia the nervous centres and spinal marrow, having become insensible to the touch, are also insensible to the stimulus of the galvanic pile, but the agitation produced by galvanism speedily exhausts the remaining nervous irritability, which very seldom is sufficient to react upon the phrenic nerves to a degree required to establish normal respiration.

"Autopsies have established that chloroform accumulates in the lungs, but particularly in large quantities in the brain, all parts of which disengage a strong odor of this anaesthetic, which seems to prove that this organ is the place of election of the agent, of which the deadly effects are in proportion to the quantity of the vapor respired."

A discussion followed as to the best method of inflating the lungs in the case in question, it being contended that it was a very difficult thing to do; one member suggesting tracheotomy as the only sure method, and another inquiring how it was possible to introduce the sound into the larynx.

"M. Farrier replied that daily experience proves that inflation is less difficult than it is thought to be, and that the air blown in by the nasal passages penetrates to the lungs. To introduce the sound, the instrument having been passed to the upper part of the pharynx, it is easy to raise the glottis and slip it into the larynx."

The conclusions of the report were adopted.—*Ibid.*

Treatment of Pneumonia.—A writer in *L'Union Mèdicale*, (No. 82,) quoting the account given by Dr. Burkart, of the great benefit he has derived from the employment of acetate of lead in pneumonia, states that he can amply confirm it by the results of his own experience of its use, and especially in the aged. In the pneumonia of childhood and the adult, he has always preceded its employment by bleeding, antimony, and blisters. But there are cases in which these means either exert no effect, or after a while cease to do so; while in others the patient will not admit of bleeding, or antimony may not be tolerated. In such, lead will be often found a valuable resource, and the pneumonic inflammations, that hasten on the progress of softening in phthisis, may be often arrested under its influence. In the aged, defective power

contra indicates active bleeding, and the pneumonia, in the place of proceeding towards resolution, becomes complicated with abundant secretion, the patient dying from asphyxia. in consequence of his inability to expel this: even if Antimony has less power over these cases, and is ill supported, while the lead gives rise to no dangerous consequence. Still, as a general rule, a local bleeding and small doses of antimony, should be first prescribed; but if amendment be not very prompt, or debility commences to appear, the lead should be exchanged for the antimony. In other cases, in which the re-action is less at first, and debility of earlier occurrence, the acetate may be given from the beginning. When resolution is very tardy, a large temporary blister will often give the first impulse to a movement that the acetate will continue. The period of convalescence is much diminished by supplying the patient with a sufficient nourishment when the appetite returns. The mean dose is four or five grains in the twenty-four hours; this being increased, in rare cases only, to six or seven. It may be given in solution in distilled water, with syrup, or in pills, adding opium only when there are indications for it. It must not be omitted for colicky pains and temporary constipation, which are usually relieved by lavements. The author has continued it for three or four weeks without any ill effects being produced, although the characteristic blue color of the gums has been present.

Dr. Richter reports in the Berlin *Medecin. Zeitung*, (No. 32,) that Staff Surgeons Drescher and Lemke, after repeated trials, quite confirm the favorable accounts that have been given of the efficacy of chloroform inhalations in the treatment of pneumonia and bronchitis. In their mode of employing it, thirty drops of chloroform are poured upon a piece of closely pressed wadding, a finger or two in breadth, which is wrapped up in another piece of wadding, and held about half an inch from the patient's nose for about five minutes. This is repeated every hour until some remission of the symptoms occur, when twenty drops are inhaled every second hour, until convalescence is established. The subjective symptoms, as constriction, pain, irritating cough, are usually diminished, even after the first inhalation, and entirely disappear from the second to the fourth day. At the same time, the sputa lose their bloody admixture, remaining tough, however, until about the fourteenth day, when they disappear, as well as the cough. The frequency of the pulse is diminished by the second day, descending, in a case of double pneumonia, from 120 to 80. Sweating generally sets in after the first inhalation, and never later than the fourth or fifth. As regards the duration of the

disease, complete recovery, so that the patient can be discharged, does not seem to take place more rapidly than under treatment by bleeding. The preferability of this treatment arises from its simplicity of application, its applicability in cases in which, from the character of the disease or the individual, depletory treatment is forbid, and the rapidity with which the distressing symptoms are relieved, and convalescence is commenced, the patient being enabled to leave his bed by the fourteenth day.

M. Fournier (*L' Union Med.*, No. 99,) furnishes an account of the success M. Aran has obtained from the employment of veratrine. The hyposthenising effects of this drug seem to have been exaggerated; for the forty-one cases in which he has seen it given, in quantities of from two to three or even four centigrammes, divided into six doses in the twenty-four hours, no alarming prostration, excessive vomiting, &c., have been observed. Of these patients, a fifth part only were females, and the bulk of them were between twenty-four and thirty-six years of age, many being persons of feeble constitution. The majority came in about the fourth or fifth day after the invasion of the disease, and the next day red hepatization was almost always recognized. With the exception of three or four, they all exhibited active febrile re-action. In about one half the cases, soon after taking the medicine, a deep-seated burning near the spine, and a peculiar sensation at the epigastrium are complained of. Although in a few cases there was no vomiting, this occurred in the others upon an average of from three to five times during the first day, tolerance soon taking place, and a peculiar nausea continuing for several days. No active purging resulted from these doses.

The effect on the pulse was constant and sometimes immediate. In twenty-four hours this fell by fifteen to thirty-six beats; and there was the curious phenomenon of an eminently febrile acute affection co-existing with an apyretic condition of the circulation, the pneumonia still pursuing its course, as ascertained by auscultation. The pulse descended to sixty or seventy, or even sometimes to fifty-six or forty-eight, and took several days to resume its normal frequency, even when the medicine was suspended; it not being uncommon to find it only fifty-five or sixty during the early period of convalescence. Its character was also changed, it being less strong and more depressible. That this condition of the pulse was not the result of the emetic power of the drug was seen in the fact, that it prevailed in cases where no vomiting was present, while in others it was not proportionate to the amount of vomiting. The temperature of the body was constantly diminished by two or three degrees, never, however, descending

lower than 96-8 degrees; the skin also remaining constantly moist. A notable langour followed the taking of the medicine, being more than a simple sedation, but less than true prostration. It was, however, not alone upon the febrile condition that the veratrine exerted its power, but also upon the local disease itself, as shown by the changed condition of the respiration, cough, expectoration, and physical signs. In more than two-thirds of these cases, the respirations were diminished by four, eight, ten, twelve, fourteen, or even more per minute, on the first day; such diminution of the frequency of the respiration being much more in unison with the diminution of the pulmonary lesion than the lessening the number of the pulse was. Whenever a diminished number of the pulse, contrasted with a stationary or increased number of respirations, the local disease was of a very menacing character.

Veratrine given alone suffices for the cure of pneumonia; and of twenty-three cases so treated, some of them being very severe, twenty-one recovered, resolution usually occurring on the fourth day. The great success, however, that attended bleeding in the rare cases that resisted veratrine alone, induced M. Aran to try the effects in severe cases of commencing treatment by a *single* bleeding. The rapidity of the cure of cases so treated has been remarkable. The veratrine treatment is especially applicable to primary simple pneumonia, occurring in vigorous adults, and is not so well suited for the adynamic forms of the disease.—*Med. Times and Gaz.*

REPORT ON MINERALS.

It will be remembered by some of our readers that at the exhibition of the East Tennessee Agricultural Society last October, we placed our Cabinet of Minerals upon exhibition. It has been our intention to publish the Report made by the committee on minerals, and think the present a good opportunity for doing so. We have begun in this number the publication of the Report to which the committee alludes, intending to issue the entire work in book form during the present spring. The work will contain about 100 pages, and the matter will be as practical as can be made. It is our design in its publication to afford a sure and unerring guide to the minneral wealth of Tennessee, and the surest way of availing ourselves of its advantages.

REPORT OF COMMITTEE ON MINERAL PRODUCTS.

It is eminently appropriate to the main design of the Annual Fair in East Tennessee, that much consideration should be given to the development of our mineral wealth.

Its relative importance in the estimate of our industrial interest most certainly demand this.

It has but recently come to be known, in the chief markets of our country, that our soil and climate are admirably adapted to the production of wheat; and our Agricultural industry is just now receiving peculiar encouragement from the estimation in which our flour is held by distant consumers, with whom our railroads are for the first time securing to us a ready intercourse.

There is already, from this cause, a very rapid expansion of our agricultural interests, and we may properly assure ourselves of a very successful future in the ordinary course of raising and milling our crops. Yet, it should not be forgotten that Nature has not given us broad and fertile prairies, which, at the same time that they so bountifully reward the farmer's industry, quite equally limit his occupation.

We may, we will have, indeed we now have individual farmers who have no occasion to avoid any comparison; yet nature has decided for us that we have other great duties, and taught us other great hopes than the farm supplies. These rugged mountains are our peculiar wealth, eminently so, in the appointment of providence. Their treasures of Marble and Coal and of the useful

metals must have more to do with the distinctive industry of East Tennessee, than our excellent cereals and beautiful fruits.

The beautiful display of Mineralogy, and especially of ores, now on exhibition by Messrs. Currey and Proctor, sufficiently merits attention from the striking elegance of their individual specimens, their variety, and the taste with which they are arranged. But the greatest claim to our consideration arises from the fact that so large a proportion of the East Tennessee minerals hold high rank among the most useful of such products.

The varieties of *Coal* seem designated for all the main purposes of this mineral. Nature has given us, in this respect, at our very doors, what most communities are obliged to seek from long distance.

The several varities of *Iron* ore, on exhibition, cannot, as it seems to your committee, be surpassed in any equal extent of territory in the world.

There is hardly any purpose, to which useful metal can be applied, for which nature has not given us the best and most abundant of the appropriate ores. From the pure iron to the loadstone itself, all varieties are found within our limits; and the artizan can select what is most abundant in quantity and excellent in quality, as well as find it least difficult of mining, or of transportation, or of manufacture.

The rich and wonderfully various forms of *Copper* ore as exhibited in the beautiful collection of C. A. Proctor, Esq., present the same proofs of eminent advantages in respect of this highly important mineral.

Of the *Zinc*, the *Lead*, the *Marble* and the many other useful minerals, the same may properly be said.

Dr. R. O. Currey has accompanied the exhibition of specimens with a particular and elaborate report, embracing general and scientific descriptions, geological and topographical locations, etc., which, it is presumed, will be soon given to the public, in a form to be read and studied by our citizens at their leisure.

Of the minerals on exhibition from particular locations, your committee esteem the following worthy of special notice. Breccia Marble, Citico creek, Monroe county; Variegated Marble, Niblo's Quarry, Knox county; Variegated Marble, Hawkins county; Black Marble, near Pigeon River, Sevier county. Of the *Iron ores*, the Red oxide, abounding in the Cumberland range, in intricate association with coal, from Cumberland Gap to Georgia; also, special specimens from the large stratum near Knoxville, in the fork of Holston and French broad rivers; also, the Magnetic Iron ore from Carter county, and the Brown He-

matites from localities too numerous to mention. Of the *Zinc ores*, carbonates from Powell's Valley, and from Jefferson county. Of the *Lead ores*, those from Anderson, Carter and Blount counties. Of the *Copper ores*, those embraced in C. A. Proctor's collection from Ducktown, which equal in richness, the best from Lake Superior, European and South American mines, on exhibition in Mr. Proctor's general cabinet. Of *Manganese*, specimens from Blount county. Of *Coal*, specimens of the best quality from various localities in the Cumberland range.

Your committee would allude with particular commendation to the elaborate and complete maps and reports of Messrs. Proctor and Currey, embracing specifications of the mining districts and general geological formations.

Your committee would respectfully recommend to the consideration of the gentlemen of the Agricultural Board, the designation of a premium, to be awarded at the next annual Fair, for the best essay upon the mineral wealth of East Tennessee, embracing a particular and reliable description of all the localities of all the important minerals, together with the probable qualities and the proper analysis of the ores, specimens of which shall accompany the essay.

We would also suggest that the premium be sufficiently large to justify the amount of time and labor involved in the necessary local examinations and the expense of scientific analysis; also, that the Directors of the Society shall withhold the award in case none of the essays presented shall be regarded as sufficiently meritorious; also that the essays presented shall be the property of the East Tennessee Agricultural Society, from which may be drawn whatever can contribute to the more systematic and complete knowledge of this great interest of our community.

We are confident that such an essay will form a book, the sale of which, with copyright, will justify the specification of a generous premium, which will be most highly appreciated in this and neighboring States.

Your committee would recommend the award of the premium specified in your schedule, to Dr. R. O. Currey and C. A. Proctor, Esq., for their joint exhibition (one thousand specimens) of the minerals of East Tennessee. Respectfully submitted.

GEORGE COOK,
J. B. MITCHELL, } Com.
J. R. DEAN,

THE

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ORIGINAL COMMUNICATIONS.

A SKETCH OF THE GEOLOGY OF TENNESSEE,

CONTAINING A DESCRIPTION OF ITS MINERALS AND ORES—THEIR VARIETY, AND QUALITY—MODES OF ASSAYING AND WORKING, TOGETHER WITH THE CHARACTER OF THE SOILS AND THEIR PRODUCTIVENESS.

BY RICHARD O. CURREY, A.M., M.D., KNOXVILLE, TENNESSEE.

(Continued from page 208, Vol. 4, No. 4.)

Mineral Resources.—The minerals which are to be found in East Tennessee are the following: Sulphate of Barytes, Sulphate of Lime, Carbonate of Lime, Arragonite, Marbles of various colors, Nitrate of Lime, Sulphate of Magnesia, Magnesian Carbonate of Lime, Alum, Wavellite, Silica, Talc, Chlorite Slate, Hornblende, Garnet, Feldspar, Porphyry, Mica Slate; and of ores, we have Magnetic Oxide of Iron, Hydroxide of Iron, Scaly Oxide of Iron, Native Iron, Arsenical Iron, Sulphuret of Iron, Carbonate of Zinc, Sulphuret of Zinc, Sulphuret of Lead, and Black Oxide, Red Oxide, Green Carbonate, Silicate, Grey and Yellow Copper Pyrites and Native Copper, Gold, and Silver.

I will describe each of these in the order in which I have named them:

Sulphate of Barytes.

In many localities, sometimes alone and always associa-

ted with Lead, is to be found a heavy rock of various colors—white, yellowish, blue, red and brown. It is the heavy spar, or sulphate of Barytes. The white variety is used for grinding up into a white paint, and probably the red, brown and blue would answer for the same purpose. As a paint, it affords rather a dull earthy lustre, and even tarnishes. It is much used for adulterating white lead, and when this pigment does not give a glossy smooth coat, it may be presumed to be more or less adulterated with this mineral. Specimens have been obtained from the following localities: the *blue* variety from Sullivan co., near Kendenet's Creek; yellowish chrystalized variety, from Powell's Valley below Tazewell; reddish white from Roane county, and a pure white variety from western Blount county. This mineral may be distinguished by its weight.

Sulphate of Lime,

Or Gypsum, is one of those minerals whose importance causes it to be sought after both in Agriculture and the Arts. In our own State we find it only crystalized in limestone rock; but being contiguous to the Plaster-basin or Salt region of Virginia, it is readily obtained from thence for agricultural purposes. It has been supposed that the salt series of rocks extended into our own State; but, though numerous borings have been made, as yet nothing has been obtained to compensate for the labor bestowed.—Several of our strata, especially those ranging from Anderson county to Virginia, belong to that series of rock which in New York embraces the Saline Springs, as at Salina, N. Y.

The Plaster is most generally found in basins, of which the great Paris basin is a noted instance. Between Abingdon and the Tennessee line, the Va. and E. T. Railroad

passes through such a basin, and its importance on the completion of that road in incalculable.

Salt.

Many attempts have been made to obtain salt at various localities. This has been attempted by means of borings to considerable depth, and though the waters, which have come to the surface through them, have been of a saline character, yet so far not of sufficient strength to reward for the labor bestowed. In 1838 we visited a boring which was being made some ten miles south of Kingsport, and though salt-water was reached, yet no benefit was derived from it.

The most extensive operations yet carried on in East Tennessee were performed by the late Joseph Estabrook, whose untiring energy and confident expectations, based as they were upon his scientific explorations, gave hope of success. But just as he was ready to begin the evaporation of the water he departed this life. He was for years engaged in sinking his augurs, and after passing through successive strata of sandstones, shales, limestones, and even coal itself, he reached, at a depth of some 5 or 600 feet, a stream of salt-water, which he pronounced good. Since his death the works have been suspended. At the point where he sank his augurs, occurs an extensive *fault* or fracture of the stratum, such as we have alluded to as entering into the geological construction of the entire eastern portion of the State.

Carbonate of Lime.

The limestone rocks are properly an impure Carbonate of Lime. They constitute the greatest proportion of the rock strata, and differ in purity in different regions. Like the coals, the nearer they are to the granite rocks, the

purer are they. Thus we descend in the degree of purity from the primitive limestone, of which the *Parian* marble may be taken as a representative to the calcareous deposits of the later geological periods. The marbles belong to the limestone series, and differ according to their degree of purity. The white granular limestone, sometimes called *statuary marble*, belongs to the primary rocks. Beginning at Talladega, Ala., a stratum of the primitive limestone may be traced in a north-eastern direction to Rome, Georgia, thence to Ellijoy, thence to Murphy, N. C., and thence to the Tennessee River, where the Nantagalee River empties into it. At Murphy there are three strata of different colors—bluish white, reddish white, and white—possessing all together a thickness of nearly 60 feet.

Throughout East Tennessee the limestone strata belong to the Lower Silurian formation, and are uplifted at an angle of 45 degrees—the inclination being to the South-east. All of these strata, as well as all other rock strata in East Tennessee, may be traced in a N. E. and S. W. direction, except at points where some disturbing force has broken up and contorted them.

These limestone strata present several series, to which reference has been made in the Geological Sketch.

Among these series are found several of *marble* of various colors, from reddish white to black.

These marbles may be classed according to their geological position, or their internal characters:

1. The Breccia Marble of the Unaka Range.
2. The Black Marble.
3. The Magnesian Limestone Marble.
4. The Whitish Variegated Marble.
5. The Reddish Variegated.

We might have placed first in this classification the snow

white marble of the *eastern* declivity of the Unaka mountains, but prefer confining our remarks to those in our own State. We have consequently made our classification according to geological position, and defined each by its physical characters.

So uniformly do the rock strata preserve a N. E. and S. W. direction that it is easy to trace out one of these strata of marble almost through the entire length of East Tennessee. Thus the stratum which is to the North of Knoxville is on a line continuous with that north of Rogersville.

1. *Breccia Marble.*—Dr. Troost in his Third Report announced the fact that "some parts of East Tennessee contain beautiful varieties of calcareous breccia," and in his Fourth reiterated the fact, "I have seen there (East Tennessee) breccia marble which surpasses any that I know." He directed attention to no specified locality. During my researches through East Tennessee, I have examined several strata of these Breccian limestones in the counties of Blount, Monroe, Sevier and Cocke. The strata are all along the western declivity of the Unaka mountains, and observe the same general direction and dip as the strata of East Tennessee, and being thus situated, the extent of it from Georgia to Virginia may be readily and safely conjectured. Its thickness may be estimated at several hundred feet. A specimen before me from the West Fork of Little Pigeon River, Sevier county, is of fine quality and dark colors. Its angular fragments are cemented together by fine whitish veins. Another specimen from Citico creek, Monroe county, is composed of angular fragments of limestone of several shades of black and grey, with white veinings. As the lines which define the various fragments are perfectly distinct, the veins

are seen to cross from the one to the other without interruption. The stratum is quite thick. It readily admits of a fine polish.

Another marble from the vicinity of Cleveland possesses such a resemblance to the foregoing, a black ground, with numerous white veins, that it may be regarded as a continuation or spur of the foregoing.

Black Marble.—In connection with the foregoing stratum is a stratum of uniform *Black Marble.* The texture is firm, grain fine, and it admits of a smooth and shining polish. At Dandridge this stratum of black marble is quite thick, and much used. It is easily quarried, and being on the head waters of the French Broad may be readily shipped to market.

3. *The Magnesian Limestone Marble* constitutes, as we remarked in our geological sketch, the lowest stratum of the valley of East Tennessee. It composes the stratum which forms the anticlinal axis of Powell's Valley, and is found as one of the members of the many series which go to make up the rock strata of East Tennessee. It is of a greyish white color, very compact, and though not susceptible of as fine a polish as other varieties, yet will make a fine building stone. It is this stratum which lies underneath the city of Knoxville, extending from the river to the vicinity of the depots, being about 2000 feet thick.

There is a stratum of chertz limestone interstratified with the magnesian limestone of East Tennessee, which presents some striking characteristics.

1. It presents the appearance of a vein thrown out between the layers of limestone, imparting its character to the contiguous rocks, and infiltrating itself into its fissures and seams. The city of Knoxville is built upon this magnesian limestone, and these chertz veins are found at Stony

Point, near the mouth of 2nd creek—the Rabun Gap Road being cut through it—also near the mouth of 1st creek. Another stratum is found on the bluff overlooking Flag pond, through which Gay street is cut. Its presence may be supposed wherever the surface of the ground is covered over with fragments of flint rock.

Some specimens from the vicinity of Knoxville present the appearance of nodules of chert cemented together with calcareous matter. The chertz nodules were evidently hollow, as the calcareous cement apparently fills up the cavity. Though hard, and the component parts possessing different density, yet it may admit of a polish.

4. *Whitish Variegated Marble.*—This variety, and the succeeding might properly be classed as one, as they lie contiguous to each other. This is the stratum which composes the bluff at Mecklenburg, the residence of Dr. J. G. M. Ramsey, and also that near the residence of Col. John Williams, 2 miles east of Knoxville. It is white, with numerous red specks interspersed through it. It is used for tombstones and slabs, and is extensively worked in Knoxville.

The same stratum is found on the south-side of the river, and of course might be discovered to the N. E. or S. W. of these points. We have traced it through New Market Valley.

5. *The Reddish Variegated Marble* is the most abundant, and that which has been most extensively quarried in East Tennessee. It is of various shades of red and white, with greenish specks, and being composed, in a great degree, of crinoideal fossils, it presents a beautiful appearance when polished. The stars and the stems of the encrinites are quite distinct. Some specimens are quite uniformly red, others red and white in a heterogenous

mixture; others again are red and white in wavy lines, whilst others are reddish with white crystalline veins, anastomosing like net-work throughout the entire mass. These strata are thick and easily quarried.

The Rogersville marbles were those which were first opened. As early as 1838, in company with Dr. Troost, we examined this quarry, and information given as to its extent and value. The specimens obtained at that time, polished for and presented to us by Dr. Walker, of that place, though handled by hundreds, yet preserve their original polish. We do not know the extent to which these quarries have been opened, nor yet what success the companies met with. They have now a better outlet by Railroad than they ever possessed, and it is believed that the works will be continued more successfully. The blocks for the National Monument, at Washington came from these quarries. Some are composed of innumerable small white and red grains, with an occasional greenish speck of chlorite, while others are deep red, intersected with veins of white magnesian carbonate of lime. In these quarries there are various shades of red, some are almost pure white.

Mr. Sloan's quarry, two miles east of Knoxville is probably on the same stratum as the Rogersville quarry. The marbles are of the same character. They are much used in Knoxville, and from this quarry was obtained the columns for the chambers of the Capitol.

Mr. Sloan, under charter from the Tennessee Legislature, is now organizing a company for the more productive working of these quarries. He has a contract to furnish marble for the interior decorations of the Ohio State Capitol.

Dr. Grant's quarry, 22 miles from Knoxville, on the

line of the Railroad, is a continuation of the same stratum, and many specimens have been obtained, filled with fossils, variegated, of an impure reddish white, and black with white veins.

Dickeson's quarry, near Knoxville, is on the same stratum, and work will soon be begun for the manufacture of mantels, slabs, tombstones and monuments.

In this quarry slabs possessing a yellowish cast, have been obtained; also a variety which, for the regularity of its stripes or bands of white and red; Dr. D. denominates the zebra marble, or as fossil encrinal stems are found in it also and resemble stars, a more suitable name would be the *banner* marble.

There is another and different stratum of marble one mile south of Knoxville, on the Maryville road. This stratum is about 300 feet thick. A lease has been taken on the property by Prof. M. W. Dickeson, of Philadelphia. It differs in no respect from the foregoing quarries.

There is also a stratum of these variegated marbles at New Philadelphia, a continuation of that one mile S. of Knoxville.

Another stratum is to be found north of Clinch mountain, and may be traced through the entire length of that valley.

These strata will doubtless be a source of great wealth to East Tennessee, and the labors of her Geologist could not better be directed than to a special examination of them.

There is a blue compact limestone, interspersed with white spots, the internal cast of a fossil shell, found in Hamilton county, on the line of the Nashville and Chattanooga Railroad. It will make a beautiful marble.

The building stone found in Chattanooga, when dressed

will present a fine appearance, but being largely mixed with earthy matter, it will not admit of a fine polish. One of the specimens is of a soft yellowish color, intersected with reddish veins of carbonate of lime. The quarry is a fine one, and supplies the city.

Similar to the foregoing, though containing in addition a large per cent. of silicious matter, is a stratum of limestone from the lands of Col. D. P. Armstrong, near Knoxville. This is the same stratum which has been opened on the lands of Mr. Moffett, below the city, and which has supplied the stone for the building of the pillars on the Rabun Gap Road.

In the same quarry is a more compact stratum which affords a smooth conchoidal fracture, and the reddish seams, through a greyish white ground, present a beautiful appearance in the polished specimen. Its compactness requires it to be worked with care.

Whilst in the limestones of Middle Tennesse are found numerous beautiful crystals of magnesian carbonate of lime, in East Tennessee many of the entire strata of rock are composed of this magnesian carbonate. The reddish colored veins which are found so constantly intersecting the blue limestones, the variegated marbles, and the red argillaceous limestone, is the magnesian carbonate of lime. It occurs in large strata throughout East Tennessee. It is very hard and difficult of being burned into quicklime. It has been believed that the existence of magnesia in the limestone of any district, is an indication of sterility, magnesia being supposed to be hurtful to vegetation. Facts, however, do not support the belief.

There are several strata of red argillaceous limestone through East Tennessee. A stratum passing through the country one mile north of Knoxville, may be traced to the

N. E. through Grainger and Hawkins, and to the S. W. to the Tennessee River. It is highly inclined, in some places being perpendicular, forming a bold projecting escarpment as may be seen near Sinking creek, five miles west of Knoxville. The rock has a dull and earthy lustre, soft and readily broken.

It is interstratified with a whitish stratum, which has been supposed to possess the properties of an hydraulic limestone, and has been burned for that purpose. Further trials will be made with it.

This red limestone, when exposed to the air, soon crumbles down and mixes with the soil, giving to it a red color. Deep in the ground, it is quite compact. Reddish white veins of crystalline magnesian carbonate of lime is found tracing it of different thicknesses.

It is most generally found lying underneath the stratum of variegated marble.

Saltpetre.

Saltpetre is manufactured from the nitrate of lime found in caves. This nitrous earth exists as an effloresence or in delicate needle shaped crystals. In the manufacture of saltpetre, which is a nitrate of potash, the nitrous earth is mixed with wood ashes, and thrown into a hopper. Water being added, a chemical action takes place. The potash takes the place of the lime, and the nitrate of potash passes through in solution. This ley is crystallized, rewashed and recrystalized.

A cave is found near the residence of John Smith, Esq., 4 miles north of Knoxville, in which the nitrous earth is found.

Several of the rock houses so abundant in the mountainous part of Sevier county, will furnish saltpetre. It is also found in caves in Morgan county.

During the late war, saltpetre was manufactured extensively from the materials found in our caves, and now that it is commanding again a high price, inducements are held out for the investment of capital. A company for this purpose was chartered by the last Legislative Assembly (1855,) and they design, in a short time, commencing operations. The object of the Company is not only to manufacture saltpetre, but also gunpowder. The presence of this nitrous earth in these caves arises from the action of decomposing animal matter, upon the limestone rock, the nitrogen of the ammonia coming from the excrement of birds and animals, being converted into nitric acid, and acting upon the limestone to form nitrate of lime.

Whilst in many countries saltpetre is made artificially by acting upon the carbonates of lime and magnesia, with nitrogenous animal matter, and the refuse plastering of old houses is also preserved for this purpose, we have such an abundance of this nitrous earth in our caves, that it is singular it has not attracted the attention which it deserves.

Sulphate of Magnesia,

Or Epsom Salt, has a saline, bitter taste. It is usually found in fibrous crusts or masses, possessing a glossy lustre. It is found in Warren county, in large masses. It is also found in the caverns of Sevier county, not far from Sevierville. It is there found in fibrous masses, filling cavities in the slate rocks. A specimen of that character has been sent me, the internal yellowish being the iron pyrites, the white fibrous crust, the sulph. magnesia, and the slate rock surrounding the whole. To free it of these accompanying minerals it has to be broken into fragments and exposed to the air until decomposition takes place. The entire mass is lixiviated, the fluid evaporated, and as the

sulph. magnesia is more crystallizable than the other two, it is only necessary to pass it through repeated washings and crystallizations to obtain it pure for commerce.

There is in Sevier county a remarkable cave, or *Rock House*, formed, as is the case in all other instances, of shelving strata of slate, or of limestone, in which Epsom salts, in quite a pure state, is found in abundance.

Throughout East Tennessee the limestone rocks are a a magnesian carbonate. From these also the sulphate of magnesia may be obtained by acting upon the broken rock with sulphuric acid, a combination takes place between the acid and the magnesia, which is crystallized from the insoluble sulphate of lime.

Alum.

Throughout East Tennessee, the materials for the manufacture of alum exist in abundance. This is found chiefly in the aluminous slate, which is to be found in the Sequatchee Valley, Clinch mountains, and the declivities of Smoky mountains of East Tennessee.

In these aluminous slates are generally to be found iron pyrites, which on exposure to air and moisture is decomposed. The iron pyrites is composed of sulphur and iron, and the decomposition consists in absorbing oxygen from the air, and forming sulphate of iron, or copperas. When thus formed the acid sulphate acts upon the aluminous slate, and forms sulphate of alumina. Thus there is formed one of the ingredients of alum. This being a double salt, the sulphate of alumina and potassa, after the decomposed slate is placed in a hopper, it is lixiviated. To this lixivium or lye, a lye of potash, which is made by passing water through ashes, is added as long as the alum falls; it is then evaporated and crystalized. But in the manufacturies a large process is carried on so as to free the alum

of all impurities. For instance, to expedite the decomposition of the alum slate, it is first roasted and then exposed to air and moisture, for a certain length of time, and the evaporation of the alum lye, when united with the potash lye, is carried on in lead pans, and with great care.

From the superabundance of the materials for the manufacture of this salt, both west and east of the Cumberland mountains, it is surprising that it has not received the attention of enterprising capitalists, and the same may be said respecting saltpetre, and epsom salts and copperas, all of which exist in such abundance, and contiguous to each other. In many places in Sevier county there are large heaps of these materials, already having undergone decomposition and awaiting the manufacturer's skill. The cave of Sevier has already been alluded to. This aluminous slate, so valuable in the manufacture of alums, has been regarded by many as coal, and been worked for that purpose. When spontaneous decomposition has taken place in these slates, the result of all the changes is a sulphate of alumina and iron.

Wavellite

is a Phosphate of alumina. Found encrusting the limestone of Middle and of East Tennessee. It has been found in Roane.

Silica

is another very abundant mineral, and is known by the names of sand, flint, quartz, rock crystal. It embraces also all of the finest gems, as amethyst, prase, chalcedony chrysoprase, carrolian, sard, agate, mocha stone, onyx, cat-eye, jasper, bloodstone or heliotrope, lydian stone, opal, chaleedony, tabesheer, and many others of inferior quality. The base of all these is silica, the difference being due to

different coloring substances, and a different proportion of water.

Sand is an ingredient in most soils, the per cent. of which may be obtained by repeated washings. It is important, as from it many of our productions derive the material to harden their stems, and perfect their growth. It is essential to the perfection of all the cereals and the grapes. Sand in the soil comes from the disintegration of the sandstone rocks, distributed by nature so uniformly among the limestone rocks. While, as a general rule, the limestones are found in our valleys, the sandstones are found on the sides and summits of our hills and mountains. The disintegration of the two, with an admixture of animal and vegetable matter constitutes the generality of our tillable soils.

Sandstones differ in degrees of fineness, and hence are adapted to different purposes. The fine grained are used for grindstones and whetstones, while the coarse grit or conglomerate are worked up into millstones. The best materials for these is found in a silicious stratum, situated contiguous to the sandstones, and above the limestones of East Tennessee. Along our streams may be found immense banks of fine drifted sand, well calculated for the manufacture of all kinds of glass.

There are immense masses of sandstone in the slate belonging principally to the coal measures, and the Devonian series. In Monroe county are to be found, in the fields, quantities of perfect crystals of quartz of various sizes and different colors. I have a specimen of amethystine quartz of a lively color, found not far from the Smoky mountains.

It is singular what variety of crystalline substances sometimes enter into one mass. A specimen before me pre

sents sulph. strontian, an impure limestone, quartz crystals, and sulph. lime, all resting the one upon the other. It seems that the impure limestone was the original bed, and one side the sulph. strontian crystallized, while on the other first the quartz and then the sulph. lime.

Talc.

There are several varieties of soapstone, all of which possess, according to their degree of purity, the peculiar characteristics of a pearly lustre and unctous or greasy feel. Color from white to dark olive green, easily separated into lamina, which are flexible but inelastic, soft. The steatite or soapstone, pearly white, from Nautlee town, N. C., lies contiguous to the stratum of marble noticed as having been opened at Murphy.

It is said that there is a stratum of soapstone on the declivity of Smoky mountains, in Monroe county, of a pearly white color.

There are many purposes to which this mineral may be applied. It is easily cut into vases. For fire-stones it is valuable in furnaces and fire-places. As a polishing powder for other minerals, for extracting grease from cloth, and as french marking chalk, it is indispensable in the arts and trades.

(*To be continued.*)

ART. XXI.—HYGIENIC GYMNASTICS.

BY H. CULBERTSON, M.D., ZANESVILLE, OHIO.

(Continued from page 218, Vol. 4.)

SECTION I.

AS TO THE LAWS RELATING TO HYGIENIC MEANS.—Changes in matter are produced by super-material laws. Two portions of matter, resting one upon the other, cannot change their forms, except per force of a higher law than either possesses. Associated molecular form, *i. e.* the union of particles of matter with each other by Spirit, without Spirit could not be, *i. e.* exist. The very stones about us bespeak this. The Spirit therefore must move the Matter, and the latter must be subject to the former, thus their relation is destroyed and drawn in the effect. The first then is of more value than the last, and its active presence supports life. Particles of matter have forms, and are the opposite of Spirit. By the resistance of the former to the movement of the latter, is Spirit improved in its character. The freedom of spirit from the influence of matter induces the death of associated forms. By motion are spiritually-influenced forms improved in power, provided the forms be not radically changed by the motion; and there is none of its spirit shown, the matter being appended to the spirit. Two spiritually-influenced forms may modify each other under motion.

Vitality is of Spirit. The human body a *form* of matter *joined to* Spirit.

Outward influence affects vitality by first acting on bodily matter; and vitality being moved may act and modify the form of matter.

The Will is of Spirit, and therefore may change the human form by its impulses.

In the truly normal condition, the greater the quantity of matter in a form, the more powerful *to do*, in the vitality of that form. This relates to strength, not to activity. Thus the molecular of the human form may be changed in power, in form, size, and in density, by *motion* or by *rest*.

1st. As to *Power*.—The use of an organ to a degree compatible with its organization, strengthens it by the augmentation of vitality *in it*, and the consequent increase of its matter. The strengthening of one organ of the human system developes to a certain extent the power of others of the same; or they are not in equilibrium. The various organs are harmonious in the maintenance of life. The ability of the *body to do*, depends on that of its muscular system; that of the mind, I apprehend, on the worth of that "*one talent*" which has been given the individual to improve, modified by the character of his nervous system as a whole. The impulses of the will influence muscular contractions according as it is strong or weak, and this is subsequent to that same influence being felt in the mortiferous narrow structure belonging to the acting muscles. These remarks apply to the effects of motion under this head; but on the contrary the nearer the usual condition of an organ is to the state of rest, the less powerful is it *to do*—a part which has been active, and becomes from any cause, less so, will on trial be unable to perform uninjuriously to itself, its former acts. While a certain amount of rest is necessary to induce our most perfect growth, instances are numerous where too much of it has produced death of a part, or even of the whole bodily portion of the human system.

2d. As to change in form. Two like parts affected by the same influence will act as one; two unlike, are two; and to produce an effect in contiguous parts, and in order to render unity of object more perfect, there must be an *inter* power, acting between these parts, and that, too, in harmony with the main influence. If a second power be brought to act on a moving part, then a form is induced relative to the double acting force. The force of vitality tends to give identity to each form of the human body, while the laws governing *non-vital* matter would destroy such. Many of the laws of vitality are opposed to those of matter. But if a body *rests* its forms may be modified, then the laws of matter are more potent than volitional vitality, which latter is quiescent, as in sleep the body assumes a relaxed condition for lack of activity; and for the same reason the face under the excessive influence of certain liquors, have a peculiar appearance from want of activity.

In the animal economy, so great is the preponderance of *fluid* over *solid*, that its particles move freely upon each other; and consequently the durability of its forms are more transient than they would be if the relation cited were not so disimilar. Changes in bodily form may be produced from without, through æriform, fluid, or solid matter.

3d. As to change in size. By motion an associated form may be increased in size by the addition to it of particles of matter of *its kind;* or by the distention of its particles. The former is the healthy mode of growth, the latter may be to a certain extent uninjurious to the particular form. The removal of the particles from a form, or diminution in the extent of its particles, will lessen the size of an associated form. The increase may be for, *i. e.* in behalf of, the particular form, or for others about, and like, or unlike it. In no way can a form increase in size except through motion. A human molecule may be enlarged through the influence of volitional and non-volitional vitality; the former is occasionally, the latter occasional, or continued in action.

4th. As to change in Density. The greater the number of particles crowded into an associated *form* of *fixed size*, the more dense will it be; and if the size, from any cause, decrease more rapidly than the particles are removed from the form, an increase of density will ensue. The less active the *inter*-spiritual power, between the particles of a vitally influenced form, and the fewer the number of those, the less dense will it be. This relates to density induced by motion. But the nearer *such* a form is to the state of rest, the less dense will it become.

The above cited laws are those which must ultimately be considered in order to estimate the effects of various influences upon the human system, whether through æriform, fluid, or solid matter.

2d. As to the Means and their Application. All gymnastics are based on the opposition given to vitality by one or other of the three forms of matter just named, but the potency of those hygienic gymnastics which we are considering, depend upon solidity. In order that solidity may be beneficial, the spirit must be opposed to the *material* form, in such a manner as to cast ad-

ditional duty on bodily form; that augmenting the body in size, increasing its density, and through these rendering it more powerful. The application of vitality to *solid* matter, with a view to the production of this effect, (inducing health,) constitutes a part of the Hygienic art.

The various essential forms of solidity in gymnasium are in number eight, in name as follows: Single horizontal bar, parallel horizontal bars, parallel vertical bars, horizontal ladder, inclined ladders, vertical beams, parallel suspended ropes, and thoracic dilator.

1st. *Exercises of the Single Horizontal Bar.*—This should be made sound, of hickory wood, and should be two inches in diameter, and six feet in length, and so arranged that it may be placed from three to four feet from the floor. The upright posts which support its ends should be six inches square, and securely braced.

It is shown in Fig. 1st. A good exercise to strengthen the lower extremities, in jumping over this bar by or without placing the hands upon it, or leaping over it after running. The exercise at A is calculated to develop the muscles of the arm, shoulder and ligaments of the latter, and also to enlarge the chest. It is performed by placing the back to the front of the bar, grasping it with the palms placed front, raising the feet from off the floor; and then by throwing backwards the head and back, and bending the arm at the wrist backwards, flexing the forearm upon the arm, in such a manner as to bring the center of gravity behind the bar, elevate the body so as to set upon it, by straightening the arm. It is a good exercise to enlarge the chest latterly, to swing forward and back, in the position the body is in before attempting to elevate it, as above directed.

The exercise at B.—This hardens the biceps muscles by compression, and strengthens the abdominal and lumbar muscles, also improves the nutrition of the brain, by throwing an unusual amount of blood into it, and hence we conceive it to be very useful to such as are engaged in sedentary occupations, in which the mind is much tasked. It is performed by placing the back to the bar, and bringing the arms behind it, bending the arms at the elbow, grasping the bar with the elbow, placing the palms firmly up-

on the sides of the abdomen, high up as possible; then removing the feet from the floor, swing forward and back until the momentum required will cast the body around the pole, making it describe a circle. It is more easy to do this when the motion is from forward to backward, than from backwards to forwards.

The exercise at C.—This is useful in one variety to strengthen the muscles of the arm, shoulder, the pectoral and muscles in the dorsal region; in the other to improve the condition of the muscles of the thigh. One is performed by taking hold of the bar behind, palm in front, and turning the limbs up between the face and bar, casting the legs over the bar so as to grasp it by flexing the legs over the thigh; then loosing the hands from the bar swing back and forth, keeping the muscles of the legs rigid. The other is performed by grasping the bar with the hands as before, straightening the body and raising it up by bending the elbow latterally and posteriorly at the same time keeping the legs flexed, elevate the body so much as to bring the centre of gravity upon the other side of the bar, and ultimately reach the floor erect on that side.

The exercise at D is performed by placing the bar eight feet from the floor, and grasping it palm front, then swing back and forth at arms length, until the momentum acquired will cause the body to describe a circle around the pole. This is a difficult exercise, because of the skill required to perform it, every muscle, not particularly those of the hands, being brought into action.

There are other exercises belonging to this piece, as setting astride the pole, and grasping it with both hands, one on each side, one a little in front of the other, and swinging the limbs from side to side, keeping the body straight, then when the momentum is sufficient, turn the body around, under the pole with such rapidity as to bring it up, from the other side, to the erect position again.

Another is accomplished by grasping the bar with both hands, placing the right leg over it, bringing the left leg over the right foot, letting the body swing under the pole; then drawing the body up with the left arm, on the right side of the bar, turn the right arm much flexed on the left side of the pole, and at right

angles with its side; then change the left hand by grasping the top of the bar, and turning the arm much flexed at right angles with the left side of the pole, elevate the chest by straightening this arm, which will naturally bring the center of gravity immediately over the pole, then complete the exercise by straightening both arms, and so set astride the pole.

2d.—*Exercise of the Parallel Bar.*—These are represented at Fig 2. Their measurements are in height from the floor, five feet, and in length twenty feet; each bar should be two inches in thickness, and then of a half in width, and secured on its edge by tenors and mortice, and also be supported by strong perpendicular upright posts, and then tenanted into the base pieces, which latter should be at least 6 by 4 inches in size, and extend laterally far enough to give a broad base. They should be equidistant from each other, (the base,) about 23 inches, and be so braced that they may yield a little laterally in the middle of each. This piece is varied by inclining the base, and again by the inclined step bar. This piece is considered of the most importance to gymnastics, inasmuch as the feats which are performed upon it exercise severely every muscle of the body.

The exercise at A. To perform this the fingers are placed on the outside of each bar, the thumbs on the inside, and the arms being straightened, the body is supported perpendicularly between them and the base, the feet not touching the floor. The body may now be carried forward by advancing one hand and successively the other, along the base, keeping the body rigid. This may be varied by inclining the shoulder forward, bending the elbows, and quickly straightening the arms, project the body forward, and prevent its falling by grasping the base with the hands again. This should be repeated until it can be done the entire length of the piece. Another variation may be accomplished by placing the hands and body as at A, and swinging the lower extremities forward so as to bring them at right angles with the body, then straightening them quickly, let the momentum acquired by the act, and the inclination of the shoulder and head forward, cast the feet as high above the bars posteriorly as possible, the hands remaining fixed. This exercise should be practiced daily

until the feet can be brought from below the bar, to behind the hands, and finally to nearly over the head of the performer. Some adepts turn entirely over, swing themselves by catching on each bar, with the arm flexed, thus striking on the contracted biceps and triceps muscles. This feat may be varied by springing forward, with the hands when the feet are up posteriorly, and again when the limbs are being flexed in point, at right angles with the body, and again by jumping backwards with the hands when the body is up posteriorly. A very severe exercise may be had in varying this still farther by flexing the arms at the elbow and wrist, outward and backwards, when the body is up posteriorly, and holding them rigid, let the body swing down forward. This practice is excellent to enlarge and strengthen the chest.

Another feat is performed by placing the body as at A, and flexing the arms at the wrist and elbows, backwards and outwards, and straightening them quickly, (the shoulders being inclined forwards,) and spring with the hands along the base, the arm on completing the act being flexed as at first. I have known three such acts carry the performer over the entire length (20 feet) of this piece. An exercise for strengthening the wrist is effected by placing the hands on the top and at the extremity of the base, (b, b,) and grasping them firmly, raising the feet from the floor, elevate the body above and between the base. This requires much power of wrist, and but few can do it. The abdominal muscles may be developed by resting the thigh upon the top of one bar, placing the feet under the opposite, and bending the body back to the floor, until it possesses a heavy curve, and raising it to the setting posture. This should not be performed if the would-be actor has, or even has had hernia in any of its forms. This may be varied by grasping one bar with both hands, palm towards the outside of it, and placing both feet on the top of the opposite, the body is made to describe a curve under the bar, on which are placed the hands, the back being uppermost, and then the abdominal muscles are made tense.

A very fatiguing exercise, and one well calculated to enlarge and strengthen the muscles of the thighs, is performed as follows: The person standing between the bars brings the arms and hands

behind the body, and rests the open hands upon the inner face of each bar, and keeping the body rigid, the head thrown back, the chest forward, elevate one limb flexed, (the thigh being at right angles with the body,) straighten the limb, make the foot straight as possible with the leg, and inclining the body forward, let the hand glide along the base until the straightened limb reaches the floor, by the inclination of the body forward. Each limb should be alternately treated in this manner several times in succession. These are the most important exercises performed on this piece, than which there is no better for developing the body generally.

[TO BE CONTINUED.]

ART. XXIII.—EVANS' PRACTICE.

TWELVE MONTHS' PRACTICE IN THE CHEROKEE NATION WEST.

BY J. P. EVANS, M.D., LATE OF TAZEWELL, TENN.

[Continued from page 134, Vol. 4.]

CASE 136.—*Gastric Intermittent.*—Sept. 6th. Mrs. McDonald, a middle-aged man, who resides in a wilderness region, high up on the Arkansas river, arrived in town, sick. The disease was a double tertian intermittent, a paroxysm every day, alternate days corresponding, in regard to the morbid period. The intermissions, as he stated, had been short, except on the two first days; (he had been sick four days;) travelling in the sun on horseback, had exercised its usual pernicious effects, and the case had assumed a malignant aspect. During the paroxysms (including all the stages, except that of the sweating,) gastric irritation was present. Found him with a dry hot skin, (except during the act of vomiting, and a few minutes afterwards,) small frequent pulse, countenance of a pale, sunken cast; vomiting occurred about every fifteen minutes, and the ejections were of a bilious character.

℞. Muriate of morph., ¼ gr., immediately. As there was a constant craving for cold drinks, I also gave water acidulated with citric acid. On a recurrence of the vomiting, I directed about one drop of creasote in water, every half hour, and also

placed a sinapism over the stomach. It was now early in the night. About two hours afterwards, I visited him again, and found that the nausea and vomiting were somewhat mitigated.

℞. Repeated the M. morph., directed the creasote to be continued, and made 24 grs. S. quinine into twelve pills. Two were to be taken every two hours, until all were consumed.

The vomiting did not return after taking the last portion of morphine. Jugulated. He returned to his residence a short time afterwards.

Case 165.—*Dysenteria.*—Sept. 6th. A negro woman, belonging to W. P. Ross, had been complaining of the usual symptoms of dysenteria, tormina, tenesmus, &c., for which I directed

Opium,	-	1½ grs.,
Acet. Plumb.	-	2 grs.,
Amylum,	-	9 grs.

Mixed into a powder every 2, 3 or 4 hours, according as the morbid action of the bowels might seem to require. Some ten doses were given, and nothing more was needed. This case was unattended with fever, and (as I consider all such cases) mild.

Case 166.—*Intermittent Fever.*—Sept. 6th. A son of George Paris, aged twelve years, had a quotidian intermittent, with short intermissions. Arrived during the cold stage. ℞. Muriate of morph. ⅛ gr. immediately. Dulc. nit., half a tea-spoonful every two hours, during the hot stage.

Sulph. quinine,
G. Myrrh, pulv., *ä ä* 15 grs.,

Mixed, and divided into six portions. All to be taken during the intermission. Jugulated. This subject relapsed in about two weeks. A similar plan to the above was pursued, with a like result, and there was no other relapse.

September 6th.—Case 167.—*Intermittent Fever.*
" " " 168 " "
" " " 169 " "
" " " 170 " "

The first of this group was a man aged about 30 years; the next his wife, aged about 20; the third their infant child; and lastly, a negro woman. The wife, negro, and child, had diar-

rhœa, in addition to intermittent fever. S. quinine was given to all, muriate of morphine to the wife and negro, and Dov. powder, with acet. of lead, to the child. All the cases were arrested promptly. No relapse.

Case 171.—*Intermittent Fever.*—Sept. 6th. A female child of Rev. Isaac Sanders, about two years old, had obscure febrile symptoms. As it is in many other cases, the parents did not know the nature of the malady, and therefore called a physician. ℞. S. quinine, 10 grs., in six portions. One to be given every two hours through the night. There were no more febrile symptoms. No relapse.

September 7th.—Case 172.—*Intermittent Fever.*

" 8*th* " 173 " "
" " " 174 " "
" " " 175 " "
" " " 176 " "

Two adults and three children. All jugulated with S. quinine alone. One of them relapsed.

Case 177.—*Repressed Rubeola.*—An infant child of Hon. Riley Keys, had progressed with measles to maturity, when a sudden fading of the eruption occurred, and the child had a pale, sunken aspect, with frequent retching.

℞. A minute portion of S. morph., and then ten drops of paregoric every two hours, with warm tea or coffee. In the course of five or six hours the eruption réappeared, and the child soon recovered.

Case 178.—*Rubeola.*—Sept. 8th. A son of a widow lady—Mrs. Keys—aged about fifteen years. The disease had progressed naturally to its stasis. Febrile excitement high, with head-ache and general distress. Had taken sufficient purgatives. ℞. Small doses of S. morphine, with two tea-spoonful doses of Dulc. spts. nit., were directed, every two or three hours. The case did well.

Case 179.—*Remittent Fever.*—Sept. 9th. A little daughter of Jesse Sanders had been sick three days with continuous febrile excitement, without any remission perceptible to the parents. Had taken no medicine.

℞. S. quinine 15 grs., in six portions, as usual; and to be given during the night, and early in the morning. Jugulated. No relapse.

Case 180.—Sept. 9th.—A son of James Sanders, aged twelve years, subject of case 36, had been afflicted with a quotidian intermittent, for several days, and had taken no medicine.

℞. S. quinine, 16 grs. in six portions; to be taken during the night, and early in the morning. Jugulated. No relapse.

Case 181.—*Malignant Intermittent.*—Sept. 9th. Jesse Arnold, nearly a full-blooded Cherokee, speaks English, and is a blacksmith. He had been sick a week or more. At the first there had been a laxity of the bowels, which had rapidly degenerated into a colliquitive diarrhœa, upon the action of a dose of calomel. The febrile disease was a quotidian intermittent.

Reached him in the afternoon. Found him in a clammy sweat, pulse very small and frequent, respiration hurried and laborious, thirst urgent, and watery discharges taking place from the bowels every ten or fifteen minutes; moaning frequently.

℞. Sulph. morph., ¼ gr., immediately, and opium 1½ gr., in an hour, and the same to be repeated every two or three hours, until the diarrhœa should cease. S. quinine, 30 grs., in twelve pills. Two be taken every two hours, commencing at nine o'clock at night. Jugulated. In such cases the bowels *must* be restrained, and I know of nothing which will answer the purpose but opium, or some of its preparations; yet it is highly important to guard against the induction of coma, when exhaustion is manifested.

Case 182.—*Bean in the Nose.*—Sept. 9th. Visited a little daughter of Thomas How, aged two or three years, who had slipped a bean up the right nostril. I first endeavored to force it out by closing the opposite nostril, placing my mouth to the child's, and expiring forcibly—a method which I had once practiced successfully; but the bean was quite irregular in form, and the air passed by it. I then endeavored to seize it with small bladed forceps, but it was too far in, and still slipped further. I then forced it onward with the blunt end of a probe, until it passed the soft palate; the child retched and expelled it by the mouth.

Case 183.—*Fever and Convulsion.*—Sept. 10th. Visited a little son of Hon. Riley Keys. Found it with high febrile excitement, and was informed that the fever had been ushered in with a severe convulsive seizure, filling the description of epilepsy.

℞. Dulc. spts. nit., half a tea-spoonful, with water, every two hours, until 9 o'clock at night, and then to commence giving S quinine, 15 grs., divided into six portions, one every two hours, and continue until all should be taken. Before morning there was a clear intermission, and neither fever nor convulsion reappeared.

Case 184.—*Malignant Remittent.*—Sept. 10th. Visited Rev. John Smith, (a native Methodist preacher,) 20 miles. For a week he had been laboring under a remittent fever. He stated that he had not at any time noticed much abatement of febrile excitement, but had been conscious of *feeling worse* every day at or near nine o'clock, A. M.

He is about 30 years of age, large, and very corpulent for one of his age.

Found him (just at night) in a clammy sweat, respiration rather frequent and laborious; some tendency to coma; pulse frequent and *quick*, and inclined to fullness.

℞. S. quinine, 30 grains, divided into six portions—one to be taken every two hours, commencing at nine o'clock at night, and ending at seven o'clock, A. M., the next day.

He was also afflicted with a slightly swollen and painful condition of the inguinal glands, to which I paid but little attention.

Remained with him. Before morning there was a perfect intermission. Jugulated. No relapse. He had taken purgatives some days before my visit. Ten grains of S. quinine, divided into three portions, were left to be continued every three hours.

Case 185.—*Scrofulous Pneumonia.*—Sept. 11th. Lydia Dick, an unmarried woman, full-blooded Cherokee, aged about 20 years, has been afflicted with an enlarged ancle for a year or more. When the swelling first made its appearance, it was quite painful, and gave rise to an abscess, which remained indolent for several months, and had been treated by another physician with

iodine embrocations, principally; but finally the dermoid tissue gave way, and an orifice formed, and gave exit to a sanio-purulent matter, sometimes of a curd-like nature. She has a brother whose neck is greatly disfigured with irregular cicatrices, evidently having resulted from scrofulous tumors.

She is now afflicted with a tertian intermittent, attended with a severe hurried cough, and frequent transitory pains through the chest.

℞. S. quinine, 30 grs. Twenty grains were divided into four portions, and one directed to be taken every hour, so as to intercept the paroxysm which was expected in six or seven hours; the remaining ten grains were to be taken two or three hours before the first morbid period after the next, provided the four doses of five grains each failed. Jugulated. But, although the fever was cut short, the cough and pains in the chest continued, less severe it is true. The tumefaction of the ancle diminished quite perceptibly.

She continued, (as I was afterwards informed,) with more or less cough and uneasiness in the chest, until

October 4th, (about three weeks from the above described attack,) when she was again stricken down with fever in the remittent form, and on the 6th I visited her. Found her (in the afternoon) with high febrile excitement, distressing cough, with a copious foam-like expectoration; diarrhœa; pulse small and frequent; shifting pains through the chest. There had been no intermission; no perceptible chill; respiration frequent.

℞.—S. quinine, - 25 grs.
Tannic acid, - - 15 grs.

Mixed and divided into eight portions. One to be taken every two hours, commencing at 5 o'clock, P: M. Opium in one grain doses, was directed, to restrain the diarrhœa. Again was the fever cut short, and every distressing symptom mitigated; but on the 17th I was again sent for, and found a similar condition prevailing, with more intensity, and attended with more prostration than previously. The cough was more severe, and expectoration exceedingly copious; respiration thirty-nine to the minute, and the pulse 115; diarrhœa.

℞. S. quinine, - 2 grs.
Opium, - - - 1 gr.

Every two hours, until three portions are taken; then the same of quinine, and half a grain of opium, until as much as thirty grains of quinine are taken.

Iod. potassium, 2 grs., in syrup, every six hours. She perspired profusely through the night, but febrile excitement did not disappear. In the morning the respiration was 20, when she was sleeping, and pulse 92.

Left Iod. Pot., as above, and opium to restrain diarrhœa.

The fever did not fully succumb to the quinine at this time, although it was mitigated. It returned in full force in a few days. Pains in the chest become fixed; a circumscribed redness of one or both cheeks was displayed; expectoration continued copious, and strength rapidly declined. Blisters were applied over the seats of pain, and quinine was given freely, which for a while seemed to exercise a controlling influence over the febrile excitement, but finally failed. Opium was given to allay pain, cough, and diarrhœa. Some diminution of cough and expectoration seemed to result from a large pill of balsam copaiva solidified by sulphuric acid, given three times a day. About the 20th the patient succumbed.

[TO BE CONTINUED.]

ART. XXIV.—FISTULA IN ANO CURED BY IODINE INJECTIONS.

BY DR. J. E. THOMPSON, OF BUTLER, MO.

CASE I.—Mr. B., æt. 43, of intemperate habits and broken down constitution, came to me on the 10th of March, 1855, with a fistula in ano. The patient said he had suffered from the disease for the last six months, and had applied to several physicians, but without any relief. Upon examination I found two deep-seated sinuses of five months standing, discharging an excessively putrid stinking pus. One of the fistulous openings was situated in the rectum, one inch above the anus, and the other in the left sphincter ani. His constitution was feeble, owing part-

ly to the constant discharge from the fistula, and also to a constant use of intoxicating liquors. The bowels were quite irregular, sometimes constipated, and at other times quite loose. The patient complained of a frequent "stitch" in the region of the liver; pulse accelerated and full, with scanty urine. The bowels having been constipated for several days, I ordered: ℞. Pil. hyd. No. 4, to be taken at bed-time for four days, to be followed in the morning by ʒii of Castor Oil, if the pills did not act; then tinct. iodine, to be injected into the sinuses three times a day, with ung. iodine spread upon lint and applied to the opening. Abstaining from all intoxicating liquors, and a generous diet substituted, and after the liver had become more normal, occasional use of the confectio piperis nigri, keep the bowels open and aiding granulation, the patient soon rallied, and in fifteen days after the treatment commenced was well enough to not need any further medication.

Case II.—Mr. Mc., æt. 60, of tolerably good constitution and habits, came to me on the 8th of April, 1855, with fistula in ano. Eighteen months before the above date he was attacked with hæmorrhoids which run on till suppuration took place, and finally resulting in a fistula in the right sphincter ani, two inches long, running in the direction of the rectum, some four inches, constantly discharging a very offensive and putrid matter; bowels, as a general thing, constipated; the intestines being impacted with a hard fæces, causing the most excruciating pain when at stool; pulse a little accelerated and tolerably full. Ordered

℞. Pil. hyd. No. 4, to be taken at bed-time for three days, followed, if the pills did not move the bowels, in the morning, by an ounce of castor oil. Took four ounces of blood from around the anus by means of cups, and ordered

℞. Tinct. iod., ʒss, to be injected twice per diem, with ung. iodini spread upon lint, applied to the opening; a generous diet was allowed; with confect. pip. nig. *pro re nata*, and 4 grs. sulph. quinia three times a day. Under the above treatment he rapidly improved, and in one month was entirely well.

Case III.—Mrs. R., æt. 46, of bad constitution, had been troubled with disease of the breast for some years, came to me on

the 25th of August, 1855, with fistula in ano. This lady had had a fistula for about fifteen months before I saw her, and had been treated for hæmorrhoids by several physicians with no success. She was much emaciated, and had a troublesome cough, with pain in the chest; pulse quick and resisting; bowels generally loose, troubled with a diarrhœa and pain on going to stool, with bearing down. On examining, found the fistula situated in the rectum, one inch above the anus, a constant discharge of putrid matter mixed with the fæces, with constant pain. Ordered

℞.—Pil. hyd. - grs. 40
Pulv. opi. - - grs. 10
" ipecac - grs. 20

M. F., and divided into ten pills, one to be taken three times a day. Expectorants were given for the cough, and 4 grs. of quinine three times a day, and iodine injections twice a day. Confect. opiata was also given *pro re nata*, to restrain the bowels.

In six weeks this lady was able to do her own work, experiencing but little inconvenience, the fistula being about well. At this date, Feb. 20th, '56, she is quite well, and enjoys better health than she has for the last two years.

Case IV.—Mrs. M., æt. 54, had nine children, of feeble constitution, came to me on the 10th of July, 1855, with fistula in ano. This lady had been treated for hæmorrhoids for the last three years; has had a fistula for about ten months. Upon examination I found that the fistula was situated near the anus, on the right side, discharging a very putrid pus. Bowels constipated, and causes great pain when at stool. Ordered

℞. Pil. hyd. No. 4, to be taken at bed time for four days, with a dose of oil in the morning, if the pills don't operate. Iodine was ordered to be injected twice per day, and iodine ointment spread upon lint, applied externally, and 4 grs. of quinine twice a day for ten days. In seven weeks she was well, and has never been troubled since.

As iodine seems to have a decided control over inflammation as an absorbant, we have come to the conclusion that it will cure all cases of fistula-in-ano, where medicine can accomplish anything. But, as Dr. Solly, of London, has expressed it, "one swallow

does not prove it summer, nor one or two cases establish a principle." So we would consider it the height of supererogation to attempt to establish the fact that iodine is a specific for fistula-in-ano.

M. Boinet, if I mistake not, was the first to recommend the radical cure of fistula-in-ano by injections of iodine. In a history of seven cases read by him before the French Institute of Medicine, which afforded examples of almost every variety of fistula, *i. e.* complete, blind or incomplete fistula, with loss of substance of the intestines, and fistula in tuberculous subjects, he labored to prove "that iodine injections may be advantageously used in *all cases* of fistulae, but especially in those in which the method by incision is dangerous or ineffectual; such, for example, as extend deeply, or occur in phthisical patients, or depend on some alteration of the ischium, the coccyx, or the sacrum." Finally, M. Boinet adduces the following conclusions, to wit:

"1st. Iodine injections properly administered, *can cure, radically, all cases of fistulae*, whether complete or incomplete, simple or complicated.

2nd. They cure them more promptly than the method of incision commonly employed, and with less danger.

3d. They produce no pain, and are easily produced.

4th. They permit patients to follow their occupations, and relieves them from painful dressings.

5th. They are applicable to *all cases*, and especially to those in which incision or excision are dangerous or impossible.

6th. They do no harm even if they are ineffectual, and do not prevent the subsequent use of the knife. It is, therefore, rational to employ them before having recourse to a cutting instrument."

The adductions of M. Boinet are rational—founded upon experience and physiological and pathological principles, contributing greatly to the relief of this formidable affection. Sir Astley Cooper recommends the early use of the knife; "when a fluctuation can be perceived," says he, "put a lancet into the swelling, as an early opening prevents a larger collection of mat-

ter, and I have known the wounds immediately close and no fresh accumulation follow, (*Lectures on Surgery, p.* 356.) Early opening of the abscess will no doubt prevent the forming of such troublesome fistulous sinuses; but if left to nature, they open spontaneously sometimes into the rectum without any external opening, or near the anus, so as to be quite troublesome—forming deep-seated sinuses. When sinuses form, Sir Astley Cooper recommends the use of the knife in all cases; "although," says he, "as it will be readily believed, I have seen a multitude of cases of fistula, I have only known two cases cured by injection."

Dr. Snell, of Ky., has known fistula-in-ano cured by injections of a strong decoction of Tobacco. "The cure was most complete, notwithstanding the patient was at least seventy years old, quite debilitated, and the case of six years standing."—*West. Lancet, vol. xv., p.* 320.

Dr. A. A. Harvey, of Bristol, remarks that "blind external fistula-in-ano can often be cured without cutting, by injections of alcohol the whole length of the sinuses, three or four times a day, until it brings on inflammation; when this takes place, the cure is generally completed in a short time."

Mr. Luke, of London, recommends the use of ligature in the treatment of fistula-in-ano, kept tight by means of a small screw tourniquet.

Mr. Lomas, of Manchester, also used the ligature with considerable success. So also did Dr. Wilkin, of London. Mr. Key, of Leeds, used an injection of port-wine and water; and Bransly B. Cooper used undiluted port-wine. But, among all the various treatments recommended, that of M. Boinet and Sir Astley Cooper seems the most rational; yet, Dr. Snell's is entitled to some respect. However, we consider the treatment of fistula-in-ano by the use of iodine, by injections when the disease has progressed so far as to form deep sinuses, and by local applications to the inflamed parts, the most rational, and accompanied by less difficulty and pain than any other mode of treatment yet adopted. It should in all cases be used before the knife is resorted to, it can do no harm if it dont cure.

ART. XXVII.—PROGRESSION OF LIFE, AND TRANSMUTATION OF SPECIES.

BY WM. D. KERSH, M.D., WINNSBORO', SO. CA.

The highest work of Physiology is to divine the laws of life. Physiological principles and convictions should be deduced from a more extensive generalization of the phenomena of vitality than has been deemed necessary.

"It is now time," says the great Agassiz, "for naturalists to occupy themselves in their domain, in inquiring within what limits we can recognise the traces of a divine interposition, and within what limits the phenomena (of nature) took place in consequence of a state of things immutably established from the beginning of creation. It is incumbent on Science to ascertain what is the influence which physical forces, left to themselves, exercise in all natural phenomena, and in the revolutions to which nature has been subjected." Is it possible that new species can be called into being from time to time, and yet so astonishing a phenomena can escape the observation of naturalists? Is it a part of the economy of our system that the variety of species should diminish until some new era arrived when a new and extraordinary effort of creative energy is to be displayed? Were the first created organisms inferior in grade, and more easily evolved by regular ordinances of nature, and were they in any way instrumental in bringing about the existing state of things? If organic creation has always been regulated by a uniform system of fixed laws, are these laws still in operation? It has not been long since all such questions were amongst the mysteries of natural science. But with the flood of light with which Palæontology has enriched us, we are now able to answer some of these questions, and may approximate the truth on others.

These inquiries appertain in a very great degree to the province of Physiology. It is alone through our knowledge of the existing animate creation that we view the inhabitants of antecedant worlds, and indicate their relation to existing species. Existing life is only understood well after a comparison with its antece-

dents. It has also now become the duty of all classes of society to correctly apprehend, as well as the province of the Physiologist and Geologist to investigate these subjects, so important, from the direct bearing they will continue to exercise over the minds of the civilized world. If mankind is as superior to other animals as naturalists agree, such inquiries might not be unpalatable to their elevated taste; certainly not unwholesome food for their digestion. I will allude to some of the facts that should exercise a prominent influence in their consideration. The most correct principles for the interpretation of palæontological phenomena are to be derived from the study of the operations of nature as at present manifested over the earth. The ideas generally entertained by the literary world on geological subjects are extremely vague and erroneous. They became erroneous from the intense consideration necessary to generalize so vast a science; from not appreciating the technical application of words, from the *misinterpretation* of the extraordinary accumulation of facts, upon which that science is based, &c. Some professed geological works, written by otherwise intelligent men, have done injury to mankind—the writers having failed to comprehend the subject themselves, misled numbers. The grade, the variety, the numbers and the succession of organisms are the important considerations in gaining an insight into the policy by which nature has been governed in organic creation. If it be a fact that as we descend through the series of strata representing the infinite duration of time, and the many revolutions in the animal and vegetable kingdoms, the species were general more and more simple, less and less highly organized as we descend, if such be the truth, altogether or in part, the circumstance should be understood with such interpretation of the fa as the light of modern observation reflects on them.

On the point of the proportions of evidence, which from the *habits* of organic tribes we may reasonably expect at present to have, I will avail myself of the language of one, whose intuitive perception of the truths of nature has elevated him high in the consideration of the many men of genius, now engaged in advancing the natural sciences. Thirty years ago, when from the

tendency of the then known facts, the idea of a *successive* development appeared far more probable than now, the prophetic Lyell boldly declared the insufficiency of the data upon which such generalizations were based. In referring to the absence of fossil quadrumana during the Tertiaries, he said they "had no right to expect to have detected any remains of tribes which live in trees, until we know more of those quadrupeds which frequent marshes, rivers, and borders of lakes, such being usually the first met with in a fossil state. If they know from the character of reptiles and plants found in the London clay, that at the period when our older tertiary strata were formed, the climate was hot enough for quadrumana, "we nevertheless could not hope to discover any of their skeletons, until we had made considerable progress in ascertaining what were the contemporary pachydermata." Nine years afterwards the pachyderms having been found, remains of a fossil Maccaeus monkey were discovered in the base of the London Eocene clay; the deposit of an age so far anterior to the creation of man, that 30,000 years scarcely form even a fractional part of the time. Now these highly organized mammalia have also been discovered in different ages of the tertiary, in India, France and Brazil. "When we consider the small area of the earth's surface hitherto examined geologically, and our scanty acquaintance with the fossil vertebrata even of the environs of the great European capitals, it is surprising that any naturalist should be rash enough to assume that the lower Eocene deposits mark the era of the first created quadrumana. It is however still more unphilosophical to infer, from a single extinct species of this order found in a latitude far from the tropics, that the Eocene quadrumana had not attained as high a grade of organization as those of our own time, when the naturalist is acquainted with all or nearly all the species of monkey, apes, and orangs which are contemporaneous with man." Again, "if it should be proved that no osseous remains of birds have hitherto been derived from any of the secondary or primary formations, we must not too hastily conclude that birds were *even scarce* in those eras, because if they perished on land, their bodies decomposed or became the prey of carniverous animals; if

on water, they were bouyant, and floated till they were devoured by predacious fishes or birds, and in warm climates by reptiles." As regards their fossil footprints, "certainly we cannot expect any bird of such perfect organization as the Condor of the Andes to leave its trail on a shore. No traveller after searching for footprints along the whole coast of South America would venture to speculate, from the results of such an inquiry on the extent, variety or development of the feathered fauna of the interior of that continent." In short, "it is no part of the plan of nature to hand down to after times a complete or systematic record of the former history of the animate world." "The chief reason why we meet more readily with the remains of every class in the Tertiary, than in the secondary strata, is simply that *the older rocks are more and more exclusively marine*, in proportion, as we depart farther and farther from periods during which existing continents were built up. The secondary and primary formations are for the most part *marine; not because the ocean was more universal in past times*, but because the epochs which preceded the Eocene were so distant from our own, that entire continents have been since submerged." We may only then confidently resort to the marine classes of animals, as having preserved the most perfect records, running down to us through all the successive ages. In the Siluria, the oldest of all the fossiliferous strata, we find in one province alone, (Bohemia,) 253 species of Cephalopods, the highest of Molusks, and 250 species of Trilobites. "The marine fauna, consisting of Radiata, Molusca, and Articulata, is so rich as almost to imply a more perfect development than that which now peoples the ocean." Of the vertebrata of the same age are cestraciont sharks, than which no more elevated type of fish has ever afterwards been created. An unbiased discrimination will discover, that it is upon the negative evidence with regard to the vertebrated sub-kingdom of animals, and possibly (as there is some diversion of opinion among Botanists as to the existence of carboniferous Palms) in the vegetable world, that there is any apparent progressive advance manifested by the palæontological facts. But if we take a subdivision of the vertebrated animals as reptiles or fish, it will not be

denied by any one acquainted in those branches of nature, that they were at least as highly organized during fifty minor revolutions of their creation as they are at the present time. Reptiles once approached mammalia in their organization, and it is possible the flying reptiles (Pterodactyles) occupied in part the places in the economy of nature, now assigned to birds. But it is concerning the mammalia that the most important and delicate points exist between uniformitarian and progressionist.

Since Lyell decided that the palæontological data were not of the right kind upon which to build such sweeping generalizations, every class of vertebrata has been discovered in still more ancient strata. High classed, nor indeed any class of vertebrated fish, were then not known to have lived in the Silurian seas. The cherio of Pennsylvania, the Batrachian of Nova Scotia, Apelon of Renish Bavaria, Archegosaurus from near Strasburgh, were not then known as carboniferous reptiles, nor the Telerpeton, and other reptile fossils of the old red sandstone. Birds and other strange bipeds are now known by numerous footprints to have lived in America during the Trias, and the Microlestes mammal existed during the same age in Germany. The trails said to be Chelonian in the Potsdam sandstone (lower silurian) of Montreal, are deciphered by Sir Richard Owen, to be the imprints of six varieties of articulated animals, which he calls Proticnites, and are understood to have resembled the Limulus of the Moluscus. But amid the profusion of every other form of animal life previous to the Eocene, the Microlestes antiquus from the Triassic near Stutgart, the insectivorous Amphitherium and marsupial Phascoloterium of the stones field oolite, and two (somewhat doubtful) fossil cetaian remains, from the Kimmerage clay, and (Tubicinnella) of the cretaceous of Belgium, about ten specimens constitute the whole. At the Eocene, however, they were most abundant. They have since that time undergone without any progressive improvement, (Man certainly, Troglodytes Pithecus, &c., hardly excepted,) five complete revolutions; some few species of the marine Testacea of that epoch are still in existence, showing the superior pertinacity of marine Testaceal over terrestial animal life. Notwithstanding the opinion of Sir Richard

Owen to the contrary, from the striking analogy between the foot prints of the Cheirotheria of the new red sandstone, and the abundant impressions left by marsupials on the mud of our alluvial swamps, we cannot avoid the conviction that the opinion of Kaup was correct, and that the European Cheirotheria were of a Marsupial, and not Batrachian character.

Now if the Mammalia were in existence profusely on some continents, the fossil records of which we have yet to learn, whether or not there was really any scarcity, or whether it be simply apparent, and referable to the small progress yet made in collecting the remains of the inhabitants of the land and rivers, since we have hitherto discovered *but few fresh water, and no land molusca*, in rocks of the same ages, are as yet ignorant of most of the insects, all the pulmoniferous molusca, as well as helices, and other land shells of those era. I say if they were in existence *profusely* before the Eocene, they doubtless underwent many, very many revolutions in form, and combinations of structure before our Eocene acquaintance with them. At this time the inhabitants of the sea had undergone at least 15, very nearly entire, revolutions in America. Whatever those revolutions of the terrestial species might have been, we will advert to their condition, at that, the time of our first extensive knowledge of their existence. Excepting the retention of embryonic or architypal peculiarities, no one can deny, "that the orders of mammalia were as well represented during these tertiary ages as now, and by species as highly organized, whether we turn to the lower middle or to the upper eocene, or to the miocene, or pliocene, so that during five or more changes in this highest class of vertebrata, not a single step was made in advance, tending to fill up the chasm which seperates the most highly gifted of the inferior animals and man." Nor, indeed, is there a shadow of progress manifested by our scanty knowledge of them before from the Triasic Microlestes, to the upper Oolite or Cretaceous Cetacean. But it is in reference to the appearance of the class *posterior* to that of fish and reptiles, and their general retention of archetypal or embryonic characters during the earlier ages that the debate arises. Successive progression is recognized to have been

in accordance with the law of evolution, from the simple to the complex, from a comprehensive unity to multiplicity through successive individualizations. Evolution is not, however, always from the simple to the complex, but is sometimes retrograde, as in Barnacles, and certain parasites of fish. Agassiz has inquired thoroughly into "The Natural Relations between Animals and the elements in which they live," (American Journal of Science and Art, May 1850,) and after removing the Cetacea or Whales, the aquatic type of mammals from the fishes, has shown conclusively "that there is a universal relation throughout the animal kingdom between their structure and *gradation*, and the elements which they inhabit. That in all the four great types of the animal kingdom, the aquatic groups stand in a natural classification *lower* than the terestrial, and that this connection is so intimate as to extend to the subdivisions, and so much so that I have arrived at the conviction that in an otherwise well defined natural division, the aquatic tribes should be placed below the terrestrial ones; that even in narrowly circumscribed families the aquatic genera rank below the terrestrial, and that even in natural genera, the aquatic species are inferior to the terrestrial."

The question is, are these three circumstances, 1st, that the hitherto discovered strata are more and more exclusively marine the farther back we recede into geological times; 2nd, the greater certainty of the fossilization of the aquatic inhabitants, and 3rd, their universal inferiority; are these three circumstances sufficient to explain the apparent progressive development?

[TO BE CONTINUED.]

ART. XXVIII.—PROCEEDINGS OF MEDICAL SOCIETY.

KNOXVILLE, April 9, 1856.

Dr. Moorman, President, in the Chair; all the officers present, except Dr. Hodsden, of Sevier, and Dr. Atlee, of McMinn, from whom letters of apology were received, read and filed.

The committee appointed to procure an act of incorporation

for the society, reported verbally through the chairman, Dr. Jas. Rodgers, that the duties assigned them had been discharged, and the Legislature had endowed the Society with chartered power and privileges.

The Recording Secretary was ordered to draw upon the Treasurer for an amount sufficient to liquidate any bills against the society, which may be presented during the interval of its sessions.

Drs. Pride, Lenoire and Jas. Rodgers were appointed a committee on membership.

Dr. Currey reported that he had conferred with his colleagues, relative to a resolution of this society, and was happy to receive the Corresponding Secretary as *ex officio* editor of the Southern Journal of the Medical and Physical Sciences.

The committee on membership reported favorably upon two applications for senior and one of junior membership. The report was received, and a ballot taken, which resulted in the election of Drs. Isaac Taylor, of Blount, and J. H. Sawyer, of Knox, to senior membership; and of Jas. H. Blackburn to junior membership.

The Recording Secretary was appointed Treasurer, *pro tem.*

Drs. Currey, Ramsey, and Sawyers were appointed a committee under the 6th article of By-Laws.

Drs, Rodgers and Hill were appointed committee of arrangements, to serve until the appointment of successors at next annual meeting.

Dr. Hodsden was appointed to read an Address at the next annual meeting.

Drs. Pride, Franklin, Ramsey, Sawyers, Birdwell, S. H. Smith, and Lenoir, were appointed to read at the annual session medical papers, or report cases occurring in practice. Dr. Atlee was continued, as previously appointed, to read a dissertation on the question, "Does Inflammation consist in an increased or diminished action?"

Dr. James Rodgers submitted the following as an addition to the constitution:

"*Any one wishing to become a Junior Member of the Society shall be so admitted on the recommendation of any member of this*

Society, or of any Mediciner of known respectability and good standing in the profession, though not a member of the society, or on sending before the society an Essay on some medical subject."

On motion of Dr. Jas. Rodgers, the President appointed Drs. F. A. Ramsey, R. O. Currey, and C. A. Crozier a committee to obtain and embody all the Legislative acts in reference to the State Medical Society, and having application to the East Tennessee Medical Society, and report at the annual session.

On motion of Dr. Crozier, the President of the society was requested to give to the society an explanation of the objects and plan of the Board of Physicians having control of the East Tennessee Hospital now in course of erection in the vicinity of Knoxville.

On motion, the President appointed Drs. Pride, Lenoir, Birdwell, Hill, and Atlee, a committee to report at the annual session a plan for the organization of a Board of Censors.

Dr. Currey laid on the table, to be taken up at the annual meeting, a resolution adding to the Constitution a recommendation made by the American Medical Association, relating to the record of cases occurring in practice.

A committee reported and recommended the passage of the following resolutions, which were adopted:

Resolved, That this society offer a prize of a silver medal to the author of the best original Medical Essay, on any subject connected with the medical science.

Resolved, That all essays offered in competition for the prize must be forwarded to the chairman of the committee by the 22d of February, 1857; each essay to be accompanied with a sealed paper containing the author's name, and superscribed with the same motto designating the essay.

Resolved, That the essay to which the prize shall be awarded, shall have its author declared by the opening of the sealed paper at the semi-annual session of 1857.

Resolved, That Physicians throughout East Tennessee be invited to compete for the prize.

The President appointed Drs. Hodsden, Lenoir, Jas. Rodgers, Currey, and Hill, committee on Prize Essays.

Dr. Pride then occupied the time and interested the members of the society, and a respectable number of non-medical gentlemen, in reading an address prepared by order of the society, a copy of which was requested for publication.

Dr. Hodsden, of Sevier, and Dr. James Rodgers, of Knox, were appointed delegates to the American Medical Association.

On motion, it was determined that the Medical Society of East Tennessee, though formally accepting and publishing the essays and papers presented to the society, holds itself wholly irresponsible for the opinions, theories, or criticisms therein contained, except when otherwise decided by special vote.

J. J. MOORMAN, *President.*

FRANK A. RAMSEY, *Cor. Sec.*

O. F. HILL, *Recording Secretary.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Physiological Chemistry. By Prof. C. G. LEHMANN. Edited by R. E. Rodgers, M.D., Professor of Chemistry in the Medical Department of the University of Pennsylvania. With Illustrations, &c., vols. I and II. Philadelphia: Blanchard & Lea. 1855. Through W. T. Berry & Co., Nashville.

This is one of the best and most important works on this branch of Chemistry now extant. Its value, as well as the faithfullness of its translation were fully endorsed by being made one of the publications of the "Cavendish Society."

It is in organic Chemistry, the Chemistry of products possessed of life, that such rapid advances have been made during the last fifteen years. It has enrolled amongst its votaries such names as Liebig, Berzelius, Wohler, Gmelin, Mulder, Mitscherlich, Dumas, Berthier, Pelouze, Turner, Prout, Bird, and others.

We have often thought that in the rapid strides which organic chemistry has been taking, much has originated in the imagination. After general principles had been established, a patient investigation has not been pursued to bring out details, but conjecture and hypothesis have too much been relied upón. This has arisen from the want of an extensive information of all the departments connected with such investigations, and hence deductions could not rationally be made.

In the study of organic chemistry, the chemistry of life and of products, the result of living beings, the whole field of nature is embraced; and in order to render chemistry valuable as an aid in the study of the natural sciences in every department, the progress each has made must be well understood. In this study, Physiology and Pathology are sustained by chemical investigations, each being dependent on the other. The Physiologist and the Pathologist, therefore, must be chemists. Pathological anatomy embraces only the descriptive characters, and it must be allied with chemistry to render its deductions reliable and correct.

Our author says: "The surest supports of Physiological chemistry are to be sought in general organic chemistry." Therefore

the chemistry of living beings, to fulfil the object for which it is intended, must call in the aid of general chemistry and physiology.

We are glad to see the publication of the present work. It will create a new era in chemical pursuits. It will affect the course of chemistry which has so uselessly been given for years in our Medical schools, a course which has had for its object solely to initiate our pupils into a few elements of general chemistry. What school will be the first to take the position that its course of chemical studies are for physicians as much as its other departments, and not for the undergraduate? This, change would presuppose a familiarity with the general principles of chemistry so as readily to comprehend the application of chemistry to physiology and pathology and medicine. This is what we need, and until it is given, our courses of chemical lectures in our medical schools will be ineffectual, and nothing but a farce. But is there a school that will venture to assert that its course is equal to that laid down in this truly scientific and important work of Lehmann's? It is a course of chemistry in its application to medicine, physiology, and pathology, and the student who is well versed in its principles has an unerring guide to the formation of a correct diagnosis.

In allusion to this same connection, our author on page 30 thus writes concerning the position which physiological chemistry occupies among the auxiliary medical sciences:

"It cannot be denied that most of the phenomena of animal life either consists in or are accompanied by chemical processes; nor can we form an adequate conception of the functions of the nervous system by which sensuous perception and motion are regulated, without the simultaneous existence of chemical actions. For although we are as yet unable to make nervous action fully harmonize with definite physiological laws, or to identify it with certain physical forces or imponderable fluids, all physiological experiments indicate that it is always followed by a chemical reaction, and that the nervous system experiences chemical changes by and through its own activity. It must, indeed, be admitted that any actual proof of such chemical metamorphoses is at present perfectly unattainable, and that our chemical methods would here afford us no higher aid than

that which the scalpel yields to the pathological anatomist. But ought we to despair of attaining our object, because we do not clearly perceive the direction we are to follow. Weariness of the senses is the diminished impressibility of the nerves of sense, but its cause cannot reasonably be sought for in any other than a chemical change, experienced by the conducting substance of the nerves. Such a chemical metamorphosis of the nerves of sense from external impressions can no longer greatly excite our astonishment, since we have witnessed the unexpected phenomenon of a picture produced suddenly, and as if it were by magic, from the chemical changes effected by the rays of light on an iodized silver plate. Should we not be equally justified in saying that the iodized plate, which after being exposed for a few seconds to a strong light gives only faint and half-effaced images, is wearied like the retina, when after repeated and continuous perception of all image, it gives back only the faint outlines of the object? We may rest assured that the nervous system is not exempt from chemical action; and if the nervous system itself must fall within the domain of chemical contemplation, and a chemical expression remains to be found for its action, no less than for that of digestion and for the formation of blood, it is scarcely necessary to offer further proof of the fact that chemistry is destined to play the most important part in physiology and medicine. However much we may endeavor to exclude chemistry from certain physiological investigations, we shall always find that it involuntarily forces itself upon our notice; for without it we shall be unable to find a physiological equation or a philosophical expression for a process. In a scientific point of view chemistry must, therefore, be regarded as an invaluable acquisition to physiology. We have, then, little cause to dread that Cicero's observation '*Suo quisque studio delectatus alterum contemnit*,' will be applied to ourselves, when we assert that physiological chemistry is the crowning point of every physiological inquiry.

"When we turn to practical physiology, to pathology, and therapeutics, we are again reminded that chemistry is indispensable. Is there a single disease that is not attended by chemical changes? Can we hope to comprehend or explain the nature of any process, if we are ignorant of its integral factors? Life cannot exist without chemical movements, disease cannot exist without chemical changes. Thus much in reference to pathology; while in respect to therapeutics, it is almost superfluous to observe that chemistry here also plays the principal part, for where has modern pharmacology sought its chief support, save in chemical processes and principles? And if we have advanced so far

towards a clear insight as no longer to ascribe supernatural forces to medicines, but to derive their efficiency specially from chemical properties, then must chemistry be the supporting basis of pharmacology. The physician acts upon the body mostly by the aid of matter, which retains its characteristic powers within no less than without the organization. If then nervous action likewise falls within the sphere of chemical metamorphoses, the *Nervina* (or *Neurotica*) of pharmacologists must primarily at least act chemically on this system."

And again on page 471, vol. 2, in the chapter on Respiration, he thus speaks of the mode in which it is influenced in diseases:

"Until recently, the determination of the respirations, and of the contractions of the heart in cases of disease, were little more than mere symbols, which nothing but the rudest empiricism could venture to adopt as explanations for the recognition, diagnosis, and prognosis of diseases, whilst at the present time, although our knowledge of the interchange of gases, and the influence of the movements of the respiration and the circulation may not always afford definite conclusions, it can, at least, supply us with certain indications of the most essential constituents of the pathological process, by which we may regulate and modify our medical treatment. The more exact knowledge of the respiratory functions which we now possess has thrown a clearer light on the process of fever than any of the innumerable treatises which have been written on the subject. We are indebted to pure physiological investigations for numerous elucidations of some of those groups of symptoms which we meet with in certain diseases, such as pulmonary tuberculosis, emphysema, certain heart-diseases, diabetes, &c. No one can deny that the great advance which has been made in modern times in respect to our knowledge of respiration, has afforded us a deeper insight into these and many other pathological processes, but it would carry us too far were we to enter more fully into the results yielded in this respect by pure physiology to pathology. It is in his practice by the bedside that the physician obtains the most important aid from the physiology of the respiration. We do not exaggerate when we assert that there is scarcely a page of this section on the respiration which does not treat of facts from which the physician may obtain the most valuable hints for his treatment of various diseases, and more especially of pulmonary affections."

We commend the work most heartily to all medical as well as chemical students. R. O. C.

Mortality Statistics of the Seventh Census of the United States, 1850. By J. D. B. DeBow, Superintendent United States Census. Embracing: I.—The cause of death. II.—The age and sex. III.—The color and condition. IV.—The nativity. V.—The seasons of decease. VI.—The duration of illness. VII.—The occupation of the persons reported to have died in the twelve months preceding the first of June, of that year, with sundry comparative and illustrative tables.

We have no means before us of knowing the cost, to the Government, of the volume under review; but it must have been very considerable.

The evident design of the American Congress was to furnish the people with a vast fund of accurate information, with reference to the vital statistics, and mortality of the various States and counties of the Union. Other governments have laws providing for the registration of births, marriages and deaths. Rome had hers, and for hundreds of years, Parochial registration had been common in England; but perhaps the most perfect *system* is one which was introduced into Parliament in 1833; and which, through the advocacy of Lord John Russell, Morpeth, Peel, Boring and others was passed June, 1836. Under the operation of this system, annual reports have been secured by the English government of immense value, both to the government and the people. It, however, is much to be regretted that these reports, valuable as they are, are not in point of fact, more reliable. And it is in the nature of things impossible for them to be correct, while those utterly ignorant of diseases and their classification, are charged with the duty of furnishing these national reports. In compiling the enactments of a Legislative body, or the ordinary decision of an appelate court, not only a *lawyer*, but *men*, learned in the legal profession, are appointed to supervise the reports; but here in a national appointment where professional learning is vastly more in demand, necessary qualifications are wholly disregarded. Truly has the author said:

"It is more easy to satisfy mankind of the value of any other branch of statistics than that which relates to the numbers that die in any given period, their ages, their sex, occupation, condition and nativity, and the causes which produce such deaths. The consequence is that the facts remain uncollected or unrecorded, while every-body seems busy enough, more especially in our practical, money-making country, in running after those which

relate to the fluctuations of stocks, the valuation of exports and imports, the rates of taxation and the results in agriculture and manufactures, internal improvements and general commerce. The life of man is of less importance than his larder and his cloth. It was the remark of a physician, now no more, founded on severe experience, that the lawyer who saved the property of his client was always quicker, better and more cheerfully paid than the doctor who saved his life. Steamboat and railroad companies understand this well enough, for whilst they must pay heavily for destroying a bundle of merchandise, in human life they can and do wanton at pleasure.

"Such being the case, it is not singular that investigations, having for their object sanitary improvement, are pursued slower and later in all countries than those which relate to property. They meet with greater impediments, and their results are least consulted or credited. Man is the same in all ages."

We have no disposition to speak disparingly of the author, or the volume; indeed under all the circumstances, the work is singularly well done. But after the varied and multiform improvements of Dr. Jarvis, nosologists will still find ample cause to complain of the want of system in the classification of diseases. Apart from plain common sense reflections—and alone from the improvements in medical nomenclature, which were made in accordance with the suggestions of Dr. J., and from errors yet apparent, it is most obvious that a thoroughly educated medical man should have supervision of this department of public duty. And until then, those reports, however costly, will be of comparatively little worth.

De Bow, in statistical information, whether in reference to mortality, commerce, or railroads, we esteem justly eminent. We have also a pleasing remembrance of his eloquence, as on one occasion he discoursed of railroad connections between Nashville and New Orleans. After alluding to our present tributary relations with the Crescent city, and the prospective relation by railroad—our present unity of interest in commerce, and former union in battle, he exclaimed with emphasis "What God and General Jackson has joined together let no man put asunder." Though the gentleman is well qualified for some things, he is not equal to all things. Mr. Secretary McClellan, or the Congress

of the United States, would neither be undignified; but would merit commendation, if in the attainment of these ends they would in future select, or at least act in concert with medical men. It may not be known to the power that be, that there is an American Medical Association—a congress of medical men combining as much wisdom, prudence, patriotism, philanthropy and learning, as our National Congress; but unlike the last, the medical representatives, travel and work together for other's weal at their own private cost, and ask neither the honors nor emoluments of public station. J.

Practical Hand-Book of Medical Chemistry. By John E. Bowman, M.D., p. 288. Blanchard & Lea: Philadelphia. 1855. Through W. T. Berry & Co., Nashville, Tenn.

We are indebted to the Publishers, through Messrs. Berry & Co., of Nashville, for another treatise on *Organic or Physiological Chemistry.* This serves as the second part of Bowman's Medical Chemistry—the first relating to practical and analytical chemistry.

Again, we ask, to which of our Medical Schools will these researches in Physiological Chemistry serve as an incentive to the adoption of a more *rational* course, so far as its application to chemistry is concerned, of chemical instruction. The Chemistry of the schools has not kept pace with the chemistry of the books, for elementary chemistry is not the chemistry exclusively for our medical schools. As well might the course of materia medica be confined to technical Botany. But like it, elementary chemistry should compose but a minor part of the instruction in chemistry. On the contrary, it should take in the entire field of Pathology and Physiology, as based on chemical principles. This is a convenient and accurate handbook. R. O. C.

The Principles of Surgery. By James Miller, F. R. S. C., &c. Fourth American Edition. Illustrated. Philadelphia: Blanchard & Lea. 1856.

We hail the re-publication of a new edition of this very excellent work on Surgery with pleasure. Messrs. Blanchard & Lea

deserve the gratitude of the professions not only for the valuable medical works which they are constantly issuing, but also for the fact that they are ready to give us the latest and best editions.

The two works of Prof. Miller, the Principles and the Practice of Surgery, are invaluable, not only as text-books for the student, but as books for reference for the practical surgeon. They embrace every class of surgical diseases and surgical operations, and while the text is plain and lucid, the arrangement is judicious and scientific. (Through W. T. Berry & Co., Nashville, Tenn.) R. O. C.

EDITORIAL NOTICES.

THE COURSE OF CHEMISTRY IN OUR MEDICAL INSTITUTIONS.

There is no department of human investigation that has made more rapid and more wonderful developments than the science of chemistry. Look which way we will, we see it being applied to all the arts and trades of life. We see it entering into the very heart of the material world, and opening up to our gaze new wonders, showing us matter within matter, and teaching us the laws, the certain and unerring laws, which bind one atom to another, and which regulate the definite proportions of the ingredients which go to make up these atoms. It has so interwoven itself with all the sciences, as well medical as natural, that no one of them can be successfully prosecuted without a knowledge of this fundamental science.

But without stopping to consider its relation to the arts and to agriculture, we pass to a consideration of its intimate connection with medicine, physiology, pathology, therapeutics and hygiene, as preliminary to what we have to say about the caption to this article.

First, chemistry is that science, as the books teach us, which relates to the changes which one kind of matter undergoes in its action upon another. It is a science of change, and all its experiments are based on change as well as its principles deduced from it. So great and so universal therefore are the reciprocal influences which one kind of matter is exerting upon another, so as to influence its former constitution, that we may regard the universe as one vast laboratory, and all the animals and plants as so many alembics in which these incessant operations are being carried on. This science, therefore, as it relates to animate or inanimate matter, has been designated *inorganic* or *organic* chemistry. But such is the intimate connection which exists between matter, as it is found, in these two kingdoms, that there is only a principle inherent in the one which separates it from

the other. That is the principle of life. While it lasts, the animal or plant, it is true, is, to a certain extent, protected from the circumstances by which he is surrounded, but once extinct, the lifeless form sinks to its mother earth, and is resolved into the various ultimate elements of which it is composed.

In both of the departments of chemistry, substances are found which exert a salutary and important effect upon the practice of medicine. That heat is a remedial agent as well as an element of power in its application to the arts, the many uses to which it is applied by the physicians readily attest. Electricity, though decried by some on account of the abuse of it in the hands of empirics, is not the less valuable as an agent in many of the diseases of the nervous system. The air we breathe, whether in its natural state or resolved into its elements, should be pure and unadulterated, its condition unaltered, its temperature moderate, neither too high nor too low. The water we drink, and which dilutes the fluids of the body, is required to be of certain constitution to adapt itself to the wants of the animal economy, while its application in various diseases restores the suffering system, and infuses new life by removing the ill. The element of water and air exist in our system, in its blood, its fluids, its tissues, and its organs, and the whole economy suffers when they are not as the wants of the animal or of the plant require them.

The carbon of our blood differs in no essential degree from the carbon of our fires, or the diamond of the sand. And as a remedial agent, its efficacy is attested by the frequent uses of charcoal as a purifier and disinfectant, of the exhilirating carbonic acid gas, and of the antacid properties of charcoal itself. But we might thus go on commenting on each substance of the science of chemistry, and show its importance as a chemical agent, and as a remedy, but our limits drive us to another point from which to view this subject.

These chemical substances are no less remedial agents themselves, but frequently in their action produce chemical results which tend to good.

In *physiology* what shall we say of the various products in the animal and vegetable domains, of which we had no knowledge un-

til chemistry opened the door and invited the laborious student to enter and behold? And how such an insight into these hitherto mysterious operations brought about a complete overthrow of beautiful theories, and fine spun systems. Her investigations stopped not at the threshhold, but led within the temple. The proximate elements were not only ascertained, but those ultimate elements, of which these were composed, were shown to be a combination in a myriad of ways, of no more than four principles or elements. Thus composition and re-composition has gone on, and it seemed as if the only barrier to the formation of a living being was the incapacity to breathe into it the breath of life. The heavenly mandate seemed here to say, "Thus far shalt thou come."

But if important in physiology, no less so is chemical investigation in the diseased condition of the human system. Diseased structure, diseased secretions, diseased organs differ from those in health, and result as the consequence of a chemical action following upon some known or unknown cause. Chemistry then again teaches the character of these diseased conditions, and, reasoning *a priori*, leads to the adoption of these remedial agents which will have a tendency to counteract or neutralize the disposition to disease or the perversion of the healthful operations of Nature.

Whilst *Pathological Anatomy* is but the description of the diseased body or organ, *pathological chemistry* looks right into the diseased mass, accounts for its origin and points to its restoration. Thus it leads to its connection with Therapeutics—deducing those special as well as general principles upon which remedies are adapted to the cure of disease. It overturns at once that favorite aphorism of a noted sect of medical philosophers—*similia similibus curanter*, and establishes the principle that not that which excites disease, but that which is opposed to it, is the remedy which cures.

Thus we have glanced at the spreading arms of this majestic tree, and, like the noted Banyan, it rises majestically, and is every year sending down new and vigorous branches, to grow with its growth, and strengthen with its strength.

This is the science which forms one of the seven departments in our medical schools. Is its importance impressed upon the student? Does he receive that kind of instruction in this department which is calculated to make him a better *physician?* In our medical schools is chemistry taught as an auxiliary to *medicine*, or as a scientific study? Has any advance been made in the character of chemical instruction over that taught a half century ago?

These questions we will answer in our next. R. O. C.

THE EAST TENNESSEE MEDICAL SOCIETY.

The meeting of this society on the second Wednesday of last month, was very harmonious and entertaining. The address of Dr. Samuel Pride, of Maryville, was received with much favor; and though its length will preclude its entire insertion in our Journal, yet, in our next number, we will present our readers with such extracts as we may select. The subject was one in which every physician feels a deep interest—the conduct of physicians towards each other, or violation of Medical ethics.

We direct attention to the proceedings, to be found on another page; especially would we call attention at this early day, to the offer of a premium for the best original Medical Essay, to be awarded at the Spring Session of 1857. And as the physicians throughout East Tennessee are invited to compete for the premium, we hope it will elicit many valuable essays.

We would also direct attention to the resolution requiring the members to keep tables of their practice—and as soon as we can obtain a copy of the transactions of the American Medical Association for 1847, we will publish the plan therein recommended.

R. O. C.

ERROR CORRECTED.

We stated in one of our last numbers, on the authority of some one of our exchanges, that Dr. Reese had instituted suit against Dr. Cleveland for a supposed infringement of his copy-right of the Medical Dictionary. We have received a letter from Dr.

Cleveland, in which he denies any such action, no notice having been served either upon him or his publisher. We cheerfully publish the denial.

☞ A correspondent desires to know where the Dictionary can be obtained?

QUERIES.

BATES'S IRON-ALUM.

Mr. Editor:—I hope you will excuse me for making an inquiry in regard to Bates's Iron-Alum. The formula is not specific. I have endeavored to have some prepared, but the druggist failed in it. You will confer a favor on me by stating in the next number of the Journal, the amount of ingredients employed in its preparation, particularly the sulphuric acid. As it is a new medicine and praised by Dr. Smith, I wish to try it. There are some cases in my immediate vicinity that have resisted every other remedy usually administered.

Yours with respect,
S. H. McWHIRTER.

Lynchburg, Tenn., March 14, 1856.

Answer.—We have examined several of our works and find no allusion to this particular preparation of iron. Will some one of our readers furnish Dr. McW. with the desired information, through the pages of this Journal?

SMALL-POX AND VACCINATION.

Mr. Editor:—In your last I see a notice of the recent fatal mistake made in Barhamsville, Va., by the introduction of small-pox matter instead of vaccine, into that community. Will you state more particularly the result of that error—and how it happened that the matter received by the vaccine agent as *genuine vaccine virus*, not only escaped his detection, but that also of the person from whom he obtained it in Philadelphia? It seems that there are some knotty points here to examine. *

Knoxville, Tenn., April 19, 1856.

Answer.—The last number of the Richmond Stethoscope contains three articles on this subject. It was truly a sad calamity—and starts the inquiry, if the agent of Virginia with his

practised eye was unable to detect the impurity of the matter sent him, what guarantee have those who are less practised and familiar with the matter, that they receive genuine vaccine virus whenever they send abroad for it? Must they tremblingly await the result of a trial with it?

Soon after the accident, to which our correspondent alludes, had happened, the vaccine agent, Dr. Peticolas, Professor of Anatomy in the Medical College of Virginia, made request of the Governor that he would send a special commission to the infected district to examine into the nature of the eruptive disease. Accordingly Dr. Patteson was commissioned, who, after a thorough examination into the history, progress and nature of each case, reported the following results:

"The use," (of the matter sent by Dr. Peticolas to Dr. Jennings and others of New Kent county,) "has produced small-pox, varioloid, and apparent vaccine, the sickness of all being the direct sequitur of the use of the virus, about the usual time and in the usual manner.

"I suspect and have but little doubt, that it was a vaccine crust cropped from the arm of some patient who had been exposed to the contagion of small-pox, in whose blood small-pox was incubating when vaccined, and sufficiently matured to modify it. Such crusts are not distinguishable from the genuine crusts by any known law, except trial.

"The agent must have become possessed of some crusts of modified virus, from his sources of supply, other than his own rearing.

"His frank letter to you clearly shows the impossibility of answering the public demand for virus in time of panic, from croppings under his personal observation alone, and therefore the possibility of mistake.

"There are no other modes of supply known, than those to which he has had recourse, in times of panic.

"I do not see that he has been guilty of any neglect or mismanagement in the discharge of his public duty."

The Legislature also appointed a select committee with Dr. J. H. Claiborne as its chairman. After producing certain certificates, they say:

"The certificates of these gentlemen substantiate what has been affirmed by the agent, and establish beyond dispute, that the

unfortunate occurrence in New Kent could not have originated in any want of proper precaution on his part. The committee, therefore, have exonerated him from all blame, and believe that the Legislature will confirm their decision. They regard the circumstance as one of those casualties incident to the human lot, and which the most sagacious forethought or the wisest measures of precaution cannot always prevent. They would not withhold their opinion that the variolous disease was communicated from the scab sent by Dr. Peticolas, in the manner suggested by Dr. W. A. Patteson, viz: that it was a crust that had been cropped from the arm of some person in whose system small-pox was incubating when vaccinated, but in whom the varioloid was so modified by the vaccine disease that the former escaped observation.

"Such cases occur, undoubtedly, and have been reported by the highest authorities, where vaccine and varioloid disease have each run a parallel course in the same patient."

Dr. W. W. Parker, of Richmond, had also seen several cases of varioloid following the vaccination practised by himself.

After stating all the facts with reference to the singularity of these occurrences, that out of 151 cases vaccinated, 11 had varioloid and two confluent small-pox, he says:

"One very important conclusion may be however safely drawn, viz: that there is *no means* of ascertaining with absolute certainty whether or not any given scab is *genuine*.

"That a true vaccine scab may be so modified by atmospheric influences as to produce small-pox in the unprotected, has been neither proved nor disproved, so far as I know."

As this is an important subject we continue our extracts from an editorial in the same number:

"The question, however, which most interests the profession is, '*How has this accident happened?*'

"We might suppose it possible that the agent, in purchasing his virus, as he was compelled to do at times, might have been imposed upon by some fiend, who, for the sake of profit, might have sent him a small-pox instead of a vaccine scab. This conclusion is at once disproved by the report of Dr. Patteson. The inoculation with small-pox virus always causes *small-pox*, but the use of the agent's matter, wherever it produced mischief, has developed in the unvaccinated, "*small-pox, varioloid and apparent vaccine.*" The interesting paper of Dr. Parker shows that the use of virus *of his own rearing* resulted in similar conse-

quences. Indeed, we see that the scab No. 15, plucked by Dr. Parker from a healthy child who never had been exposed to small-pox, caused varioloid in eleven unvaccinated persons, and confluent small-pox in two others.

"We have then to accept the idea suggested by Dr. Patteson, that virus taken from the arm of a person who has small-pox incubating in his system at the time of vaccination, may be modified by the variolous poison, and rendered capable of producing apparent vaccine, varioloid or true small-pox.

"This opinion is corroborated by the table of Dr. Parker, who certainly came into possesion of this poisonous virus by some unknown process; who distributed it to various physicians, and who gave at one time two or three scabs to the vaccine agent. This table shows that his first vaccination was of two children *whose mother had small-pox.* According to the theory, the child's blood was tainted with the small-pox poison; the vaccine modified the original disease, and the incubating disease modified the vaccine scab.

"This plausible theory may be answerd by the enquiry, Why is it that this result has never occurred before? How often, in the history of vaccination, must it have happened that persons exposed to small-pox as were these children, have been vaccinated, and yet no bad consequences have resulted? Even with regard to this scab, we see that Dr. Parker gave a portion of it to a medical friend, who met with no ill consequences from its use. This same virus was used on many persons before its ill effects appeared, and it was from the arm of the healthy little girl who had no exposure to the disease, that the virulent matter was plucked.

"When we examine the authorities on this subject, the theory of the modification of vaccine virus by small-pox is overwhelmed. We can only at present allude to a few experiments with regard to this point, on record.

"Dr. Jewett, of New Haven, Conn., (Boston Med. and Surg. Journal, 1852,) makes the following statement:

'I was called a few weeks since to vaccinate a child who had been exposed for five days to the contagion of a very mild case of varioloid. I vaccinated the child on two successive days. Both of the vaccinations took well, and passed through their regular course, the child suffering but little except from the local affection. On the ninth day of the vaccination, the patient was taken with severe fever, which continued for about twenty-four hours, when she broke out with varioloid, and was quite sick for several days. The pustules were numerous, and

were to be seen in the throat, nostrils and inside of the mouth. Was this true varioloid? If so, had it remained dormant in the system during the period occupied by the vaccine disease? *I would state that I have used the matter taken from the patient, in vaccinating several children twice, and have found it to be of good quality.*'

"It is needless to point out the discrepancy between the proposed theory and experience of Dr. Jewett.

"In the London Lancet for 1830, the experience of Dr. Guilliou at St. Pol de Leon (Dep. Finistierre) is to the same effect. This gentleman inoculated *six hundred* persons with matter taken from varioloid patients, not one of whom had small-pox.

"When we examine the French authorities on this subject, we find that this question of the modifying influence of incubating small-pox on the vaccine virus has been decided in the negative, after a most elaborate series of experiments. The following extract from the celebrated "Dictionaire en Trente, is very forcible:

"The vaccine virus does not seem to ally itself with any other virus. When we inoculate with a mixture of vaccine and variolous matter, only one of the diseases is generally produced; or if both are developed at once, they go through their stages, each one with its own proper characters.

"In a great number of experiments made by the committee of vaccine, or by their correspondents, they have taken vaccine matter from pustules placed intentionally in the midst of scrofulous ulcers, favus and other chronic complaints, and the vaccine virus was never contaminated.

"Numerous experiments on this subject have been made by Dr. Taupin, at the Hospital des Enfans Malades. During the four years he spent in that hospital, he vaccinated more than two thousand children in every condition of health, and laboring under every variety of disease; and he especially noted the result of the inoculation—and above all, if he could observe any modification of the vaccine virus taken from these subjects. M. Taupin says:

'A great number of these children, laboring under measles, scarlatina, itch, varicella, *varioloid and small-pox*, have furnished vaccine matter which has never communicated either of these contagious diseases. The same result followed the use of vaccine virus taken from subjects afflicted with rickets, scrofula, syphilis, chronic eruptions, scald head, &c., &c. In no case (*we designedly insist on this point*) did the virus produce anything but vaccine.'"

We will only add that it is our firm conviction that while vaccine will modify small-pox—this latter disease also exerts an influence on the former. This influence may be so great in some systems as to display the peculiar characteristics of variola; indeed, we have known such instances in our own practice during the prevalence of small-pox in Nashville, in 1845. We have ever made it a point to *reject all scabs which have come from persons who possess any constitutional taint or who are laboring at the time under any specific or eruptive disease.* And by no means to use matter obtained from those who had been exposed to the variolous influence. R. O. C.

NUTRITION, ASSIMILATION AND METAMORPHOSIS.

(Abstracts and Synopses of Journal Readings.)

Ulcerations of the Ileum cause debility, (general muscular.)

Gastric and Duodenal digestion, and chylous absorption of the Jejunum, may go on sufficiently, to appropriate the largest portion of the nutritive material of the food.

The *basis* of diet to be proteinaceous matters, in such a state, that the stomach will have little or nothing to do, to bring them to a condition fit for absorption.

Lemon juice in Rheumatic and Gouty affections. Large doses,—2 to 8 ounces taken without disturbing the bowels, or producing tormina, as would be the case in ordinary cases of disease, (why is this?); Produces costiveness instead of looseness, (why so?); diminishes the heart's action, (how?)—by changing the quality of the blood, or by diminishing influence, (innervation)? Case 8th, 66 years old, (B. Retro.) Took Lemon juice 10 days; on the 5th day began to get ease; on the following day duties fatigued him, but he had no pain: on the 7th day he had a kind of shaking or throbbing in the hand which lasted for several hours; the hand then became gradually pliable, (having been stiff before), and from that time he has felt quite well.

Another case: Has been the subject of Gout for 12 years previous; within which period, he has had very severe attacks, at intervals of 2½ years, which had stiffened his joints, so that he

could scarcely hobble; says his limbs have become more and more pliant since the use of the Lemon juice; says the Lemon juice did not open his bowels,—but when he took 12 ounces per day, he had some griping pains. Effect of Lemon juice in lowering the power and frequency of the pulse.

Oxygenation of the blood and fibrination, synonymous terms; as a *general thesis*, we may say, that it is certainly by the action of the oxygen inhaled, the *albumen* of the blood is raised into the state of fibrin. Something more necessary than a direct chemical operation. Fibrine cannot be made, by exposing merely, *albumen* to *oxygen:* A *medium* necessary,—what is that medium. The blood corpuscles, the means between these two organic principles, (Albumen and Fibrine.) View of Simon and Wharton Jones on the influence of the blood-corpuscles on fibrination, probably the correct one.

Fibrinous element, only abundant among animals whose blood is rich in corpuscles, and where the respiratory process is rapidly carried on, (effect of this upon the phenomena of fevers, in the formation of limphy deposits in certain cases.)

Blood discs and Fibrine decrease in amount as we descend from birds down, through amphibia and fishes, in conjunction *pari passu* with enfeebled respiration.

Perfection in the chemistry of the animal body, regulated by the access of oxygen.

Albumen and blood-discs abundant in the circulation of *foetus in utero*, but little or no trace of fibrine, (how is this?)

In the Phlegmasisa, distinguished by a large or unusual amount of fibrinous matter in the blood, there is a coincident and rapid waste of the red blood-globules. Red globules in *plethora* found in the ratio of 175 in the 1,000. In full habits 136 in the 1,000 parts. On the other hand in Dropsy, Chlorosis, Diabetes, &c., the red globules are constantly found in no larger proportion than 68, 59, and even 55 in the 1,000 parts. In contrast with this very remarkable difference in the globules, it is curious to observe the wonderful steadiness of the *Albumen;* seldom varying in all the various states of health and disease, whatever the proportions of the other organic elements,—from between the limits of 70 and 80 in the 1,000 parts.

Albumen and blood globules appear to alternate with one another in their several proportions. If the *globules* fall off in amount, the *Albumen* increases, and *vice versa*. Effect of air and exercise on the constitution of blood. (Crasis and Discrasis.)

If the nutrient matters of the food be deflected from the point of globulation, to form lower *products* than the *Fibrine* and *Gelatine*, which would serve the healthy purposes of the body—we must look here, both for our explanation of disease and our guide in the selection of a remedy. All these growths (*products*) abound in Albuminous principles, viz: scrofula, tubercle tumors, &c. Food which ought to produce to the nourishment of the great organs of moving powers of the body, is interrupted in its course, and diverted to engender morbid processes, or add to mal-organizations already begun. In some persons extraordinary obesity results, and where the deposit of fat is subcutaneous, this often serves as a relief to plethoric habits; in others low hydrocarbonaceous products are formed, or shew themselves in the urine in the form of *sugar* or *urates;* according to the proclivity of different individuals to one or other form of disease, scrofula, tubercle, gout, diabetes, &c., will result from this one common origin. Is not scrofula the result of an impoverished condition of the blood, cured by pure, good air, as well as by good food? In Gout the same influences prevail. Only the tendency of the constitution being different, the plethoric or superfluous albuminous matters shew themselves in different local manifestations; whatever promotes the real nutrition of the body, and obviates load and stagnation in the vessels, is indicated in the treatment of both. J. W. K.

[TO BE CONTINUED.]

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ORIGINAL COMMUNICATIONS.

A SKETCH OF THE GEOLOGY OF TENNESSEE,

(Continued from page 272, Vol. 4, No. 5.)

CHAPTER III.

EAST TENNESSEE, (CONTINUED.) GLASS—HYDRAULIC LIMESTONE—CLAY, OR ALUMINA—MILLSTONE GRIT—ROOFING SLATE—CHLORITE SLATE.

Glass.

But one establishment, we believe, has ever been erected in Tennessee for the manufacture of glass. Two companies have at different times had control of it, but the business is now suspended. The glass manufactured was of the first quality—and there is no doubt but that the difficulty of getting it to market was the cause of the suspension. The crown glass manufactured in this establishment was used for glazing the windows of the State Capitol. It is of superior quality.

Our water courses abound in sand of a pure quality, and our forests teem with wood for the constant glow of the furnace. And in the confident expectation that at no distant day attention will again be turned to these manufacturing operations, we venture to introduce the subject here, as East Tennessee possesses more advantages than she did then for their successful prosecution.

By means of railroads, connection is made with Georgia and the South, and with Virginia. Other roads in contemplation will, when completed, increase the facilities of an outlet, and extend the limits of the market. The majority of the water courses in East Tennessee come from the mountains, and hence bring down pure sand, which is deposited in the bends of the rivers, and upon the islands. This sand of course varies in quality, both as regards fineness, sharpness and color, according to the rocks which have been disintegrated.

The manufacture of glass depends upon effecting a combination between sand and potash or soda. Either of these bases may be used, according as they differ in cheapness. Potash would be the base with us, as it could be readily obtained by lixiviating the ashes of wood. When these two substances are fused together, they constitute a silicate of potash. The best glass which is said to be made, is the Bohemian, and is a mixture of sand, potash and lime. The rounded pebbles which we find so abundantly scattered over our fields and hills—and along our water courses, is similar to that which is used for the manufacture of this glass. The pebbles are heated to an intense degree and then being thrown into water, they crumble to pieces. The fragments are then pounded or rolled so as to obtain a fine powder. The potash and the lime used are both of the finest quality, and the whole being mixed together in regular and well established proportions, are subjected to a flame obtained by the burning of resinous wood. The proportions are: 110 parts of pulverized flint or quartz; 64 of refined potassa, and 24 of caustic lime. During our explorations we have examined many fine banks of white sand along the courses of the Holston and Powell's rivers—and we hope at no dis-

tant day to hear of such enterprizes being again commenced. A fine market is afforded all south of us for glassware of every variety, for, on account of its breakage in transportation from the distant eastern cities, it becomes quite expensive before it reaches our markets. An establishment at this point would undoubtedly command the trade of every Southern State.

Hydraulic Limestone.

We barely alluded, on page 267, to the fact of the existence of an argillaceous limestone, which has been supposed to possess the property of hardening under water, when burned into lime.

The stratum, which has been examined, is found at the northern limits of the corporation of Knoxville—and may be traced from one end of our valley to the other. There are two strata lying contiguous to each other. The one is of a reddish color, and is easily split into flags, though frequently reddish white veins of magnesian carbonate of lime are found penetrating to some extent into the contiguous stratum. The other stratum is of a greyish yellow color and more disposed to crumble than the red. Both of these strata have been tested and the preference is given to the red argillaceous limestone. An analysis of the two varieties has yielded me the following results:

No. 1 was a specimen of the reddish variety from the surface of the stratum. It contains too much clay and silex.

An analysis yielded me the following results:

Carbonate of Lime	53
" Magnesia	3
Oxide of Iron	5
Clay and Silex	39
	100

No. 2 was another specimen from a more solid portion of the quarry, and contained

Carbonate of Lime	62
" Magnesia	5
Oxide of Iron	4
Clay and Silex	29
	100

I obtained two specimens of limestone from the quarry of Mr. Moffett, below the city of Knoxville, and analyzed them. One was a compact, reddish limestone, with yellowish grey spots, and yielded

Carbonate of Lime and Magnesia	73
Oxide of Iron	3
Clay and Silex	24
	100

The other specimen—uniformly reddish—yielded

Carbonate of Lime and Magnesia	86
Oxide of Iron	6
Clay and Silex	8
	100

We believe the limestones of that quarry, if properly calcined, will produce a tolerably good cement—and we hope that experiments will be made with it.

In all limestone there is a greater or less degree of impurities. *Fat lime* is that which is obtained from pure carbonate of lime, and is known by its swelling when it becomes moist, and at the same time cooling with a great degree of heat.

When the foreign admixtures of limestone consist of clay or sand, then a lime is yielded which possesses the property of hardening under water. These foreign admixtures must exist in certain proportions, as in fact the value of the cement depends upon the per centage of the different ingredients. It is generally known that the common building mortar is made of one-third lime and two-thirds sand; and according as these two substances

are united together, so will be the value of the mortar used. The sand and lime should be mixed together at a time when the lime is as yet caustic—as it is then in a condition to form the silicate of lime. The natural combination of these ingredients existing in the argillaceous limestones affords a quick-lime which, under water, will form an impermeable cement. If there are only 12 per cent. of clay in the limestone, it will form a cement which will require several days to harden. If 25 per cent., then we have a lime which will harden quite rapidly. This is known as the *Roman cement.*

Now, by comparing the character of our limestones with others from which good cement has been obtained, we readily see their value.

Mode of Burning.—In ordinary lime-kilns the object is to drive off the carbonic acid of the carbonate of lime, and great heat is maintained for several days for this purpose.

But in burning *hydraulic limestones,* a great heat must be guarded against. It is true, the principal object of calcining is here also to expel the carbonic acid, so as to bring about a union of the caustic lime with the clay and sand, but if too great heat be employed, the clay, in which silica and alumina exist in intimate connection, fuse together, forming a silicate of alumina, and it will be rendered hard and compact as a brick, and hence the silica being fixed with alumina, no union takes place with the lime.

A gentle and steady heat, therefore, should be employed to a degree sufficient to expel the carbonic acid of the lime as well as the water of the clay.

In the construction, therefore, of a kiln for burning this argillaceous limestone, regard should be had to the draft of air—that it be not too strong, nor variable.

While the ordinary kilns are made of an oval form, so as to admit of a strong current through the fires, the kiln for the hydraulic lime should be of equal dimensions, and so constructed in its fire grates that only a limited quantity of fuel could be applied. Remembering that the principal object is to calcine the stone *with as low a degree of heat as possible.*

Uses to which applied.—From the nature of this lime, it is an invaluable cement for walls subject to dampness. Where much use is made of brick for foundations in buildings, a coating of this cement on the inner wall, will render it dry and impervious.

It may also be used for the manufacture of pipes for the conveyance of water. Its principal use is in plastering cisterns. The rapidly increasing demand for good cisterns will render this an important branch of industry in East Tennessee.

In the early history of our country, the cool and grateful spring was the center of attraction, and the nearer the family mansion was erected to it the better. But as cities have sprung into existence, and as the country has been opened, spring-water fails to supply the demand. To the refreshing shower, distilled from heaven's alembic, we are turning for the cooling draught. This too affords a drinking-water more conducive to health. The prevalence of cholera almost entirely in limestone regions, show some connection between the geological character of the district and this disease. And as the water we drink, on account of its limestone character is regarded, as the offending agent, attention is being directed to cisterns and cistern water.

Clay, or Alumina.

The character of the various geological formations of

East Tennessee, extending through at least four great geological periods in the world's history, would lead us to expect a variety in its deposits of alumina. These materially differ according as they result from the disintegration of primitive rocks, or slates or shale. The purest is that which proceeds from the decomposed felspathic rocks, porphyries and granites, and is denominated *kaolin*, and so extensively used for the manufacture of *porcelain*. The other clays are used for coarser ware, for pottery and for brick.

The ridges of the Unaka mountains will doubtless afford quantities of decomposed and decomposing felspathic and porphyritic rock—together with granites and gneiss.

The granitic rocks are composed of silex, potassa, alumina and water. These ingredients in fact, in different proportions, compose nearly all the clays. They may indeed be regarded chemically as a silicate of alumina. But while this earth exists so abundantly in this impure form, it also constitutes some of choicest and rarest gems —thus blue alumina is called *sapphire*—red alumina *ruby*, and when transparent and colorless, the *hyaline corundum*. *Emery* also in its different degrees of fineness is an *opaque corundum*.

We have already described the localities of alum and its mode of manufacture. Our desire at present is to direct attention to the quality of our clays, both those resulting from the disintegration of our felspathic rocks, as well as those from our aluminous shales—as highly advantageous for the manufacture of both the coarse and the fine kinds of pottery, earthenware and stoneware.

But recently, as one of the trophies of the chemical art, a metal aluminum has been extracted from clay

which for the many purposes to which it can be applied, bids fair, as soon as some cheaper mode is discovered for its preparation, to replace many of the other metals in many of the arts of life. This metal is of a silver white, light, and applicable to many purposes. It may be obtained thus: The chlorides of potassium and sodium are placed with the clay in a crucible and then subjected to a high degree of heat, when the grosser particles of alumina are set free, and there remains a saline mass, in which the small globules of metal are found perfectly pure. The solvent for this new metal is muriatic acid; its melting point is the same as that of silver, but its specific gravity is much less.

Thus it may be seen that the clay of our hills contains within itself a treasure, independent of its use in many of the arts of life—a metal which from its mode of extraction at present is more valuable or costly than silver or gold; yet destined at some day to be so cheap and common that every one may be in possession of it.

Millstone Grit.

During a reconnoisance made in 1849 of the country between Knoxville and the Cumberland Gap, we passed over, not far from Tazewell, a stratum of silicious stone which would be admirably adapted for buhrstones and millstones. It presented a cellular texture, was quite hard, and filled with small quartz crystals. Occurring on the mountain lands, it may doubtless be found extending along these ranges conforming to the general geological construction of the country.

The same silicious stratum, indicated on our map, may be found all along the most prominent mountain heights —having seen it on Clinch mountain and Copper ridge.

As the future of East Tennessee points to her resources as a grain-growing and a manufacturing district—here is afforded ample materials for the construction of stones to grind her cereals into flour. To this we will advert in another chapter.

Roofing Slate.

All along the western declivity of the Unaka mountains, from Georgia to Virginia, may be found strata of greater or less thickness of roofing slate. Dipping at various angles into the heart of the mountains, it serves to form the natural roof of hundreds of *rock houses* to be found in this region, whilst the interior of the houses is furnished abundantly with the materials for the manufacture of the salts of commerce. Dr. Troost, in his sixth report, devotes several pages to a description of this slate, from which I will extract, especially his remarks as regards its existence in Sevier county. And the same are applicable to all the others:

"One of the most interesting products of Sevier county is the Roofing Slate, of which it contains extensive ranges. A stratum of it may be seen on the map of that county, lying between French Broad river and the fork of little Pigeon, a few miles north of Sevierville, and crossing the little Pigeon near this town. How far it extends I have not been able to ascertain—but a more extensive stratum is situated towards the south or rather the south-east of Sevierville, running from south-west to north-east, nearly parallel to the great Smoky mountain, and being perhaps a continuation of the Chilhowee mountain in Blount county. As I have observed above, this is a very extensive tract of slate, and from the superficial examination to which I could subject it, no quarries having yet been made in it, seems to be of an excellent quality. I have seen slabs of it, which had been detached by some natural cause, from ten to twelve feet square, and of uniform thickness—perfectly level and sonorous. To the enterprising citizens who shall penetrate this bed, it will yield some other variety of this useful substance.

"In order to give an idea of the usefulness of this slate and to point out its real characters, I beg leave to state that we distinguish the different kinds of slate, only by their exterior character, namely, their

smoothness or minuteness of grain, weight, durability, color, extent of slabs, etc. But the naturalist, who looks at the nature of the rock, considers more particularly its geological position, as forming the lowest of the fossiliferous, or sometimes perhaps the uppermost of the non-fossiliferous strata, and distinguishes it, therefore, from another kind of slate which belongs to a more recent formation. But to the Architect these considerations are unimportant.

"The good roofing slate has a dark gray, approaching to a bluish color—showing when polished an infinite number of small brilliant points, lying in the direction of the slaty structure. Such slate is sonorous, is not acted upon by acids, and gives a whitish gray mark, when scratched with iron or a piece of the same slate.

"Slate is not susceptible of a high polish like marble, but it may be brought to a very smooth surface by pumice stone or similar materials, and in this it is unctuous to the touch. Moreover, all slates or similar rocks of whatever color, may be made fit for roofing, if they can be divided into thin laminæ or slabs, which are level and sonorous, and susceptible of being trimmed and pierced with the proper hammer, without breaking, and if they absorb no water, when they have been for some time submerged in this fluid. Because, if this were the case, the frost would soon destroy them, whatever might be their other good qualities.

"The strata of slate in Sevier county are very much inclined, approaching almost to a vertical position. It is this inclination, together with the thickness of the strata, that determines the mode of extracting the slate; we can therefore prescribe no general rule for working these quarries; some require subterraneous galleries, others perpendicular shafts—while others again may be worked above ground, as in common stone quarries. These are therefore circumstances which are entirely local.

"The leaves of which the strata of slate are composed, are sometimes parallel to these strata, but oftener perpendicular to them.

* * * * * * * * * * *

"It is necessary that the slate should be split up in laminæ in the quarry, as soon as it is separated from the stratum, because whenever it has lost the natural humidity, which pervades the rocks in their natural position, it becomes difficult to split.

"It is not necessary to enumerate all the purposes for which slate may be used. A roof made of slate lasts fifty years without repairs, and when repaired will last fifty years longer. It is impermeable to rain and entirely fire-proof. It will not melt like zinc, when exposed to heat, nor rust as do tin roofs, wherever the tin, by some accident, is removed from the iron, nor burn as do our common shingle roofs. When a fire takes place in a house, it is often the case that the fire is communicated by the roof to the next—it is seldom the case therefore, in our towns and cities, that one house alone is destroyed by fire, but generally several at a time. In Europe where the houses are covered with tiles or slate, these extensive conflagrations seldom take place.

"The slate may be used for stoves and fire-places, for cisterns, evaporating pans which are heated by steam, and the coarse kinds make the best flag-stones—and when polished, slate forms fine tables and tablets for writing."

Chlorite Slate

is found accompanying quartz, from Coqua creek, Monroe county, and is an indication of gold. It is in this quartz vein, with its accompanying chlorite slate, that the gold of the Whippo-wil mines, on Coqua creek, is found.

The slate is of a dark olive green color, somewhat granular, easily splitting into slabs. On Coqua creek it forms large masses. This chlorite slate may be traced in a N. E. direction along the western declivity of Smoky mountains to the point where it crosses into N. C. To S. W. it may be traced to the Ocoee river, and is seen projecting from the bluff on the Ocoee turnpike at a point about 15 miles below Congdon's. This illustrates the bearing of the rock formations through these mountains. While it inclines at the usual dip of 45° to the S. E. its course is to the E. N. E., hence a line drawn from this point, with that bearing, will be found to pass over the same slaty chlorite on Coqua creek, and will cross Smoky mountains about the point where the Tennessee river has cut its way.

Chlorite slate often contains imbedded crystals of sulphuret of iron. These crystals are often of several inches in diameter, and when they fall out leave a square, deep indentation in the slate.

Chlorite slate belongs to the metamorphic or primordial rocks, among which are also to be found many different varieties of hornblend, containing fine crystals of garnet; also mica slate, felspar, porphyry, amethystine quartz, many of which need only the skill of the lapidary to turn them to good account.

CHAPTER IV.

ORES OF EAST TENNESSEE. IRON—LEAD—ZINC—COPPER—GOLD—SILVER.

Although we are not of the number who believe that the wealth of a country consists in its mineral resources, to the exclusion of its agricultural facilities, yet when the two are combined, as in East Tennessee, the elements of prosperity are thereby greatly advanced.

In this portion of the State, nearly the entire mineral wealth, with the exception of the iron developments in the Cumberland mountains and in Middle Tennessee, exists, and that too in such quantities as to admit of a greatly increased amount of capital for its development. This of itself, now that it is being intersected by lines of railway, will bring into this healthful region ere long an industrious population, the reflex influence of which will be felt not only in the increased amount of her agricultural products and their enhanced value, but also in all the arts and trades of life.

While, therefore, the future history of East Tennessee may now be said to be engraven with every stroke of the miner's pick, it will doubtless be so indelibly traced as not to be effaced for ages to come. Each new development will add to a knowledge of this rich store-house, and each shaft sunk be but as ladders, the deeper they extend, wherewith to explore its valuable recesses.

Iron.

In order to present the iron interest in a connected manner we will deviate from our plan, and offer the result of our explorations throughout the State, as well as such facts as we have been able to gather, into one section.

There are six varieties of iron ore to be found in Tennessee—nearly all of which are profitably worked.

1. Cranberry iron ore—magnetic ore.
2. Brown hematite or hydrous peroxide of iron.
3. Red hematite or argillaceous iron ore.
4. Sulphuret of iron.
5. Carbonate of iron.
6. Native iron, or meteoric iron.

From Carter, all along the Western declivity of the Unaka mountains, through the valley of East Tennessee, interstratified with the coal measures of the Cumberland mountains, and throughout the silicious region which surrounds, with its bold, irregular escarpments, the rich agricultural region of Middle Tennessee, and extending beyond the Tennessee river along the eastern counties of the Western Division, these ores, the one or another, are found in all abundance and of unquestionable quality.

Geographical Distribution.—1. *The Cranberry Iron ore*, which is *Magnetic*, is to be found in the counties of Carter and Cocke, and in all probability in the intermediate counties. It is associated with a greenish mineral *sahlite*, and occurs among the mica slates. It doubtless occurs in all of those counties along this mountain range where these slates and other primordial rocks are to be found in our State.

Dr. Troost, in his fourth report, thus speaks of this ore:

"The iron ore of the primordial formation is generally that kind which is called *magnetic iron ore*. Immense quantities of this ore are found in the north-eastern parts of the United States. And not to speak of the vast deposits of this ore in similar formations in Washington county, Missouri, which have formed these fifty years one of the wonders of the west, nor those of Elba, which produced most of the iron used by the Romans, and the mines of which are yet considered as inexhaustible; I must mention one situated near the limit which separates the State of Tennessee from North Carolina, at the foot of the Roan mountain, in Carter county. It seems to be an extensive vein of rich magnetic iron ore, similar to that of some parts of Sweden, and is accompanied with the same minerals as the Swedish ore, namely, a variety of pyroxene (salite or malacolite)."

But while this ore is associated with the sahlite in Carter, it is not to be found with it in Cocke county.

This ore is found compact and in layers, possessing an uneven fracture, color iron black, with a metallic lustre. Its streak and powder are *black*, and contains, according to Philips,

Oxygen	28.22
Iron	71.78
	100.00

This ore is characterized by its *polarity*, hence called *native lodestone*. Like the magnet, it loses its magnetic influence by rough usage or by heat.

It is an ore of the earlier rocks—and occurs among them in beds and masses. This ore is the same as that from which the noted Swedish iron is manufactured, and the products of the banks in Carter command a higher price in the market than that of any other ore. These ores are principally the property of Mr. Hampton and John Harding, Esq., some eight or ten miles east of Elizabethton.

The banks of ore are almost inaccessible, being among the mountain ranges, near the State line, but a good macadamized road or a branch railroad would render available one of the most valuable iron ores in the State.

2. *Brown Hematite or Hydrous Peroxide of Iron.*—This variety of ore is that which occurs so abundantly throughout Middle Tennessee, in some portions of the Cumberland mountains, and also in East Tennessee. Were we to designate the counties in which this ore is found, we might enumerate all belonging to the Western Division bordering on the Tennessee river. In fact, it enters largely into the iron interest of Tennessee, and wherever found differs but slightly. There are local names given to it by

the iron men, but as a general rule it belongs to that class into which water, iron and oxygen enter as ingredients. The component parts are put down in works on mineralogy as follows:

Iron	50
Oxygen	25
Water	25
	100

and the yield of metal is 50 pounds to the hundred of ore.

This ore occurs massive or stalactitical or botryoidal, sometimes in pots, which when opened present a beautiful iridescent surface. This is designated as *brown* hematite. It is called an *ochre* when of an earthy stratum and yellow, *clay iron stone* when hard and impure, and the *bog ore* when found in low localities.

The powder or streak of this ore is *yellow*.

The silicious region throughout Middle Tennessee and the silicious hills and knobs of East Tennessee seem to be uniformly the deposit of this ore of iron—which was in all probability formed subsequent to that of its silicious bed. This silicious bed or stratum, as we will hereafter show, rests upon the limestone strata of East and Middle Tennessee, and lies beneath the cretaceous formation of the Western District. Wherever the channels of the water-courses are cut through this silicious stratum the out-cropping of the iron, with its accompanying slates and chertz rocks, may be found on opposite sides of the valley.

In 1832, Dr. Troost found only six blast furnaces in Middle Tennessee, to which were attached ten refining forges, containing twenty-three hammers and fifty-one fires, to make blooms. But in 1836 the number of furnaces had increased to twenty-seven, producing on an average 27,000 tons of iron annually. No information is given by him at that time as to the manufacture in East Tennessee.

In his fifth report, 1840, he gives a full description of the iron ores of Cocke county—which he found traversing the slate rocks in several directions. The ores of Long creek, the property of Mr. Birdseye, and which supplied Legion furnace—the ores of Grass Fork creek —the ores of Stone's creek, on the lands of Mr. Holland —those of the Dry Fork of Wolf creek, and those along the banks of Big Pigeon river, were all examined and pronounced by him to be abundant and of excellent quality. These streams also, as well as many others found in this country, are well adapted for furnaces, forges and bloomeries. This may also be said with reference to all those other counties along this range of mountains from the Carter banks to the Telico river.

A bank of no mean importance of this hydrous oxide of iron has been recently opened in the eastern limit of Knox county, and we have examined another, some two miles south of Loudon. But as yet, neither through the interior of the valley of East Tennessee, nor through the limestone valley of Middle Tennessee, have we discovered any considerable quantity of workable iron ore. It seems principally confined to the silicious ridges.

[TO BE CONTINUED.]

ART. XXX.—PROGRESSION OF LIFE.

BY W. D. KERSH, M.D., WINNSBORO', S. C.

(Continued from page 297.)

In a review (London Quarterly, Oct., 1851,) of Lyell's doctrines on life, and its successive development as contained in his anniversary address to the Geological Society, and which appeared in the Edinburgh Philosophical Journal without any sign of dissent on the part of the able and experienced editor, Professor Jamieson, the author shrewdly suggests, "that the value of negative testimony as respects land invertebrata, should first have been shown by the comparison between the quantity of land invertebrata, co-existing with the vertebrated fossils of the secondary periods, and the same association at the tertiary periods. Progression might or might not gain advantage from the institution of such a comparison, from circumstances too accidental to be of much practical importance.

When, however, we reflect that birds and mammals are now traced down to the last great division of secondaries, we perceive that the proper inquiry is not concerning the relative proportion existing between invertebrated and vertebrated terrestrial fossil species of the secondaries as compared with those same fossil classes of the tertiaries; but concerning the relative proportions existing between the invertebrated and vertebrated terrestrial species of the primaries, in comparison with those same classes in the secondaries or tertiaries. Below the carboniferous, all terrestrial species are so rare that able geologists even deny the very existence of dry land. In the fresh-water deposits of the carboniferous, judging from the stage of investigation at which mammalia were discovered in the secondaries, we have as yet no right whatever to expect to find any species of terrestrial mammalia.

In reference to the marine mammalia we will not insist on the well known fact of their general rarity in the dredging operations of existing seas; but suggest that their numerical propor-

tion is not now very great, in comparison to the numbers of terrestrial species, and that in geological strata the *terrestrial species are now already advanced below the marine.* We may, too, institute a different comparison, less liable to the chances of fossilization in the first instance, and those of discovery in the second.

The development of specific forms of molusca was as various during the silurian and other palæonzoic eras as now; nor have we any valid reason to believe the terrestrial species were proportionably less abundant than the marine. The island of Jamaica is the center of the existing Caribbean zoological province, and according to its size is the richest in this class in the world; it contains five hundred marine species, and to this number there are three hundred and fifty-seven species of strictly terrestrial shells; all but ten peculiar to the island, and existing in different small provinces over the area. When we get such a proportion of terrestrial to marine species, we may judge what might have been the probable number of terrestrial silurian shells of which we are yet entirely unacquainted, and may admit our ignorance of the contemporaneous terrestrial animals and plants. The botanical facts of diary, upon which progression is based, is the succession of cryptogamia, phænogamia, gymnosperms and dicotyledonous angiosperms. In the carboniferous "age of Acrogens," there are five hundred determined species of plants—of these the half are ferns; the greater part of the remainder are gymnospermous conifera, by no means the lowest of the phænogamous class; unquestionable evidences of dicotyledonous structure, but botanists are divided as to the existence of real palms. This flora is peculiar by containing five times as many ferns as exist in all Europe, and in containing none, (yet recognised) of the exogens of Lindly or the dicotyledonous angiosperms of Brogniart, which constitute three-fourths or four-fifths of the existing flora of the globe.

If it was admitted we know little of the existence of the highest class of plants, palms, there is as little known of the lowest forms, thallogens, fungi, lichens, hepaticœ and mosses. Those that did exist were generally of simple structure, but frequently the most

perfectly organised of their class. In the carboniferous and permian eras, the acrogens predominate, but there were also higher classes. In the mesozoic, up as high as the purbeck, gymnosperms allied to zamia and cycas predominated, but there were also monocotyledonous or endogens of species inferior to no phænogamous plant. The cretaceous show a transition to the cainozoic. From the cretaceous upward, all existing plants are known. During this perfertly inconceivable lapse of time, four or five complete changes of species have taken place, without any step whatever in advance. Anterior to the carboniferous, the deposits hitherto examined being marine, it is quite natural that the inferior tribes that inhabit salt water should be the only known flora of those eras. The ferns, the predominating type of the carboniferous, constitute one-twentieth of all the existing phænerogamæ of the tropics; in temperate zone one-seventieth only, and in arctic America they are entirely absent; a progression in this direction, in this class equally as marked, as from the carboniferous up to this time, and precisely the converse of what is true of the other Cryptogamia, the polar and alpine zones are their peculiar dwelling place. What a double lesson in progression have we here in these same acrogens! The poles and mountain tops are regions of mosses and saxifrages; proceeding towards the tropics or down the mountain slopes, a region of rhododendrons first occur, then of pines, next of deciduous forests of evergreens, of myrtles and laurels, tree ferns and figs, and lastly of palms and melastomaceæ in the equatorial zone. A general reference to these thermatic zones or belts pervades the organization of the vegetable world. The proportion of moncotyledonous to dicotyledons, which in the plains is one to four; on the elevation of eight thousand five hundred and twenty-six feet, dry air, is only one in seven or nine. But at the same height, moist climate, they are one to three. The glumaceæ form in the tropics, one-eleventh; in the temperate zone, one-eighth, and in the frigid zone, one-fourth of the entire phanerogamæ. The leguminosæ form, under the tropics, one-tenth; in the temperate zone, one-eighteenth, and in the frigid, one-thirty-fifth of the phanerogamæ. The rubiacæ, euphorbiaceæ, malvaceæ exhibit their maxi-

mum of species in the torrid zone. The compositæ, cruciferæ, labiatæ and umbeliferæ present their maximum of species in the temperate zone, and decrease both towards the equator and the poles. These and other such cases show clearly enough the influence of the thermatic element on the prevalence and predominance of classes of plants. A moist atmosphere is marked by the increase of monocotyledons. The physical and chemical qualities of soil are as efficient as any other agency in circumscribing types.

The hypogene and tertiary of South Carolina have each their peculiar botanical features. The pinus, palustris and quercus catesbei divide the tertiary soils from the hypogene, more readily than the eye can do. DeCandole marked out twenty distinct botanical provinces over the earth's surface. Henslow indicated forty-five less distinctly. Schouw marks out twenty-five with at least one-half the species, one-fourth the genera, and also individual families peculiar to each.

The southern part of the United States, the coast of the Mediterranean, in Europe, and Africa, and China in Asia, are on an isothermal parallel. It is not therefore heat, but other and perhaps a combination of other less obvious circumstances, that has determined ours a land of magnolias; the Mediterranean coast, a region of labiatæ and caryophyleæ, and China, a region of celastracæ.

It is possible too that some *families* took their origin in the last geological age, and the circumstances determining their distribution may be less obvious now than at that time. "Naturalists," says Sir Charles Lyell, "are guilty of no small inconsistency in endeavoring to connect the phenomena of the earliest vegetation with a nascent condition of organic life, and at the same time to deduce from the numerical predominance of certain types of form, the greater heat of the ancient climate. The arguments in favor of the latter conclusion are without any force, unless we can assume that the rules followed by the Author of nature in the creation and distribution of organic beings were the same formerly as now; and that as certain families of animals and plants are now most abundant in, or exclusively con-

fined to regions where there is a certain temperature, a certain degree of humidity, a certain intensity of light and other conditions; so also the same phenomena were exhibited at every former era. If this postulate be denied, and the prevalence of particular families be declared to depend on a certain order of precedence in the introduction of different classes in the earth, and if it be maintained that the standard of organization was raised successively, we must then ascribe the numerical preponderance in the the earlier ages of plants of more simple structure, *not to the heat*, but to those *different laws* which regulate organic life, *in newly created worlds*. If, according to the laws of progressive development, cryptogamic plants always flourish for ages before the dicotyledonous order can be established, then is the small proportion of the latter *fully explained*, for in this, whatever may have been the mildness or severity of the climate, they could not make their appearance. Before we can infer an elevated temperature in high latitudes from the presence of arborescent ferns, lycopodiacæ and plants of other allied families, we must be permitted to assume that *at all times, past, present, and future*, a heated and moist atmosphere, pervading a northern hemisphere has a tendency to produce in the vegetation a predominance of analagous types of form." It is not that in the class of animals (marine invertebrata) with which we are most thoroughly acquainted through all geological ages, that we find their highest types equally predominating in the protozoic age as now —it is not in fact alone, nor indeed chiefly that the evidence from those classes support the uniformitarian policy of creation, but also the fact that the same forms of those classes that are restricted to salt water now, and the same forms that are now peculiar to fresh water, were also peculiar to salt or to fresh water then. There are no sea-urchins, corals or unimuscular bivalves inhabiting fresh water, but acephalous molusk of the genera cyclas, cyrena, unio and anodonta, univalves of the planorbis, lymnea, paludina, &c., are peculiar to rivers and lakes. Land-shells are all univalves of the genera helix, cyclostoma, pupa, clausilia, bulimus, &c., &c.

All terrestrial and fresh water shells, except two genera, have

entire mouths. Ampularia is peculiar to the fresh waters of hot climates. Such facts give geologists an insight into the nature of any fossiliferous deposit, and show that the institutions of the organic world were ever naturally developed. Australia contains twenty-one species of rodentia, four of carnivora, seven families of marsupials, no ruminantia, no pachydermata, no quadrumana. The East Indies, of smaller area, close by, contain seventy-four rodentia, fifty-one species of ruminantia, one hundred and sixty-six species of carnivora, and many pachyderms and quadrumana. The vestigarian was struck with the entire harmony of Galapagian Fauna, with progression, and commits himself where he says, "had there been mammals, and *no reptiles*, a decided fact against the development theory had been ascertained;" such fauna being in existence in Greenland, around the arctic pole, and in the Falkland Islands, Terra del Fuego, and the southern part of South America. New Zealand is, and long has been a land of struthious birds. The Galapagos Archipelago, between 500 and 600 miles off the coast of Peru, is a land of reptiles—abounding in snakes, lizards, and tortoise; one small mouse the only indigenous mammifer. If a traveler would pass by the continental land, across to the Falkland Islands, or by the Straits of Magellan to Terra del Fuego, he would pass from a land of reptiles, through the continent of reptiles and mammalia mixed, to a province occupied exclusively by many species of mammalia. Or if we take a northern direction across the North American continent, to Greenland and the North pole, the same transition, across a land of intermingled reptiles and mammalia to a field occupied by mammalia alone, occurs.

In this line there is a progressive advance from an exclusive reptilian fauna to one exclusively mammalia, and, according to the progressive and transmutation theory, it might be inferred that the northern mammalian fauna had advanced from or out of that of the tropics; but it is precisely the reverse of what would appear probable by another view of the subject.

"It is now," says Gould, "a received fact that the animals and plants of the northernmost zones are for the most part identical throughout the whole circuit, and that the species gradually

diverge from each other towards the equator, on the three continents, and that after passing the equator towards the south, there is not a return to the same species, and rarely of forms as we should expect, if variation of forms depended mainly on difference of temperature. There is, however, a return of molusks of a kindred character and form, and oftentimes to the same genera. The analogies of specimens from distant regions are much stronger when reckoned by isothermal longitude than by isothermal latitude; in the latter case we may have analagous genera, but the resemblance does not descend to species. In the first case, however, not only have we the same genera, but the species brought from great distances, east or west, are scarcely to be distinguished on comparison."

The terrestrial vertebrated and invertebrated animals and plants increase in size and species as we pass from the poles to the equator: the quadrumana being developed only in the tropics; but this law is reversed again in the higher organized inhabitants of the sea. So by proceeding in various lines over the earth's surface, we may meet with progressions analagous to the successive development of geological times.

There are two important respects in which life at, and its departure from, the North pole, resemble the protozoic era. 1st. In the uniformity of species over the whole zone; and 2d. By the multiplication of the specific types as you proceed from the polar zone and protozoic era. One glance at figures will suffice to show that the ancient worlds would suffer no more disparagement by a comparison of the number and variety of their species with the existing creation than from their grade and grouping. The whole number of species of shells on the European coast is 600; in all the coast of the Mediterranean is 600; in the Red Sea four hundred; about the Seachells 258; around Mauritius, Bourbon and Madagascar 275; 3,000 miles off the Panama coast 516; Caribean Archipelago only 500, while twelve hundred species have been taken from the oldest eocene tertiary in the vicinity of Paris alone. Even with the highest division of the animal kingdom, the vertebrata, the individual classes from the first known time of their appearance, were in each period as va-

rious as at this time. Agassiz described fifty species of fossil fish taken from a single spot of tertiary of the island of Sheppy, a number nearly equal to the species existing around the shores of Great Britain, and greater than those known to exist around the shores of the Pacific islands. From a single spot at Bee's Ferry, Ashely river, South Carolina, more than a bushel of fossil sharks' teeth were gathered in a short time. The localities of Montmartre, in France, and Mauvaises Terres, in Nebraska, alone have yielded as many large fossil mammalia as exist in all Europe and America at this time. Agassiz has discussed this branch of the subject, in the May number, 1854, of the American Journal of Science and Art, and the conclusion to which he came was that, "if we grant simply that among the vertebrata the *diversity* has been increasing with the successive introduction of their different classes, the number and diversity of these at each period has been as it is at present; that both animal and vegetable life was as active and profusely scattered upon the whole globe at all times and during all geological periods, as now. It is true that no fossil fish have as yet been discovered in the older silurian seas; but those that have been discovered in the upper siluria, are as highly organized as any fish; we are hardly justified in asserting that there were seas supporting crustacean and moluscan life, *utterly* devoid of a class of tenants who seem able to live in every example of that element which supports meaner creatures. Reptiles do not succeed fish in the old red sandstone and carboniferous: but this is not the age of reptiles; and, by the time they have been known to have been so well developed, mammals existed and birds (more than two thousand fossil tracks) in abundance besides other and most strange and gigantic bipeds, (otozoum and gigandipus.) Indeed, the animal and vegetable kingdoms were represented by species of their highest division in the triasic. There was a lapse of time incomprehensible between this and the eocene. The designs upon which species are developed are so infinite that the same specific form is never repeated twice. Whenever a species has once become extinct, it never occurs again throughout all geological times—so, too, we might have inferred from this circumstance alone, that

as all existing manifestations of organic creation is but a tithe of what has occurred before the existing species were ordained, that of these the same species are never repeated or recreated twice or in two absolute distinct localities—in two absolute botanical or zoological provinces. Agassiz considers, however, they may have "originated primatively over the whole extent of their natural distribution—not in Paris, but in large numbers in such proportions as suits their natural mode of living, and the preservation of their species, and that the same species may have originated in different, unconnected *parts of the more extensive circle* of their distribution."

In his remarks on the fish of the Tennessee river, he says: "It is not the presence here or there of this or that species, of any genus or family or higher group which I would particularly consider in the geographical distribution of organized beings, but localization upon certain parts of the globe of special modifications of definite types, representing each a distinct idea, expressed in a variety of living forms and combined in various ways in time and space."

"There is no law whatever," says Henslow, "hitherto established by which the limits of variation to a given species can be satisfactorily assigned." Blumenbach also: "No general rule can be laid down for determining the distinctness of species, as there is no particular class of characters which can serve as a criterion. In each case we must be guided by analogy and *probability*." When physiology has no better established principles concerning species and genera, both the very serious nature of the whole subject, and the extreme folly of those who jeer and deride others for denying their propositions, are obvious. The mere varieties of some species are admitted to be more dissimilar than the individuals of distinct species. Hence arises the great question concerning the stability of the characteristics of species; a question that the ablest human genius has not hitherto been able satisfactorily to solve—for the great majority who unanimously agree that species are stable, when the point comes to say what is stable, which is of one species, are extremely divided, as in the case with regard to man himself. The word, however, is applied

to every collection of similar individuals produced by other individuals like themselves. The vestigarian says the word is applied "to any group of organized beings which do not show any variation beyond *what can be proved* to have been the result of external conditions;" in short, a group that we do not know or have not seen to transmutate. Transmutationists say it is assumed that the actual species were originally so created, and that in generation they invariably produce others like themselves. From the varieties of solanum tuberosum, (irish potatoes) thirteen distinct species have been described, and the telephora sulphurea eight genera erected. Bichen says, "it is too convenient a term to be dispensed with, even as an assumption; only care should be taken that we do not accept that abstract term for the fact." But the great majority of naturalists still appear to believe with Linnæus, that the group "have certain distinguishing characters in common which will never vary, and which have remained the same since the creation of each species. The transmutation of species is supported in the Telliamed of de Mailet, by Lamark, and in "The Vestiges of Creation." The former of these naturalists believe that the transmutation was effected by the desire, the need, use, and education of organs causing their development and various modifications. To all the examples and reasoning of Lamark, it is objected that he has not adduced any positive fact to show the substitution of an entirely new sense, faculty or organ, in the stead of some other supposed or useless one.

The purpose of the "Vestiges of Creation," was "to show that the whole revelation of the works of God presented to our senses and reason is a system based in law; by which, however, is not meant a system independent or exclusive of Deity, but one which only proposes a certain *mode of his working*. This being the purpose of the work there was no necessity for the author to have established a progressive development through the geological eras, for (the laws of the Deity are most probably uniform,) nor of transmutation; and the great naturalist and the majority of them will admit the author's main proposition in full, but still deny the doctrine of progressive development; but the most who admit

progressive improvement attribute it to climatic peculiarities, and deny the generic descent of the successively developed forms.

The vestigarian conceived that transmutation was effected through the process of generation. He suggests, "that the first step in the creation of life upon this planet was a chemico-electric operation, by which simple germinal vesicles were produced; by an advance, *under favor of peculiar conditions*, from the simplest forms of being to the next most complicated, through the medium of the ordinary process of generation, and finally that the simplest and most primitive type, under a law to which that of like production is subordinate, gave birth to the type next above it; that this again produced the next higher, and so on to the highest," *not*, however, "upon a single line which should require all the orders of animals to be placed one after another but in a plurality of lines in which the orders and even minute subdivsions of each class are ranged side by side, independently in various regions and leading to forms not everywhere so alike as to fall within our ideas of specific character, but generally or in some more vague degree alike. The lines or *stripes* have all of them their peculiar characters, which persist throughout the various grades of being passed through, one presenting carnivorous, and another gentle animals," &c. Producing not one long range of affinities, but a number of short series. "The basis of each line is a series of marine forms—the remainder of the series designed to breathe the atmosphere, live on land and possess improved organization. The invertebrata, ichthyic, reptilian, ornithoid, and mammalian characters constitute horizontal or transverse grades through which the lines or stripes pass and give off branches."

"Affinities passing in conjunction with an improved organization through genera adapted to marine life, the mouths of rivers on shores, or muddy shallows; through genera in succession, appropriate to marshes, jungles, dry elevated plains and mountains. The affinities of genealogy are not to be looked for horizontally amongst orders, but vertically from an order in one class to the corresponding order in the class next higher. The first and lowest forms of the orders in a class being marine. The peren-

nibranchiate batrachia in their order, the ichthyosauri of crocodilia and divers of birds all exhibit an affinity to fish. The difficulty of such changes as the rodent to the ruminant, or the carnivorous animals to the quadrumana is not here encountered. The transitions are from one to another of a series generally similar, from the aquatic pachyderm to the terrestrial; from the otary to the otter; from certain phocæ to the bear," &c.

It is but justice to the vestigarian to give this extended statement of his propositions, as they are almost universally misapprehended. It is extremely doubtful whether *our present* acquaintance with the succession of orders of mammalia favors this hypothesis, as the existence of the marine tribes is only in the kimmerag clay—upper olite cretaceous or eocene, while terrestrial orders have been discovered in the triassic and inferior olite. I call attention particularly to this fact, as the non-discovery of cetacian remains in the protozoic is the strongest ground against a regular order of successive progression and against the above transmutation hypothesis. If we may judge from analogy, the terrestrial inhabitants of the protozoic might have been as highly organized as the regions to which our quadrumana are exclusively confined—and yet marine mammalia may have been comparatively scarce in the warm seas of those eras.

(TO BE CONTINUED.)

ART. XXXI.—EVANS'S PRACTICE.

TWELVE MONTHS' PRACTICE IN THE CHEROKEE NATION WEST,

BY J. P. EVANS, M.D., LATE OF TAZEWELL, TENN.

[Continued from page 286, Vol. 4.]

CASE 187.—*Rubeola with Diarrhœa.*—Sept. 11th. A son of Anna Price, aged five years, (subject of case 45) had measles, naturally, until the commencement of desquamation, when a severe diarrhœa set up.

℞. Dover's powd., 2 grs., every three or four hours. Three or four doses sufficed. When in Mexico, I found diarrhœa as an accompaniment or sequella of measles, to be more promptly controlled by opium or some of its preparations than when occurring under any other circumstances.

September 12*th.*—CASE 188.—*Intermittent Fever.*
" " " 189 " "
" " " 190 " "

Two infants and a boy five or six years of age. One of the infants had lost its mother and was fed by hand,—and had diarrœa engrafted on the intermittent fever. The cases were cut short with S. quinine. Minute portions of opium were added to the quinine in the case of diarrhœa. The latter relapsed. The other did not.

CASE 191.—*Acute Opthalmia.*—Sept. 12th. Ella Hicks, aged about thirty-five years, had opthalmia in 1840, in the left eye, which resulted in the opacity of the cornea; the opaque organ is not inflamed; has been afflicted several weeks, and has been under the surveillance of a "root doctor;" but owing to acute suffering, sent for me to give temporary relief. The right eye and surrounding parts were much swollen; conjunctiva very red, aud sclerotica evidently thickened and elevated. The accompanying fever was of a low type. She had taken purgatives freely, but obtained no relief.

℞. Opium - - 2 grs.
Calomel - 3 grs., every three hours.

Warm poultices of sugar of lead, sweet milk and light-bread were directed to be applied. Her sufferings were very much mitigated in a few hours, and the tumefaction subsided rapidly; but as I was not requested to retain the case, I lost sight of it. I afterwards learned that after the lapse of a week or more the inflammation returned, but was not attended with as much swelling and pain as previously, but a chronic morbid condition was established which finally ended in loss of sight.

In regard to the above prescription, I will briefly refer to a case which occurred in Tennessee, Claiborne county, in August, 1850. Having operated on the right eye of Miss Hayse for congenital cataract, considerable inflammation of an intensely painful character ensued. On returning after an absence of three days on professional business, I found my patient suffering very much. She was of a lax fibre; the pulse was frequent and somewhat corded. I bled her from a large orifice in the arm to approach-

ing syncope; she perspired freely, and felt great relief; but this immunity did not last long. Cold applications were less agreable now than warm. In a few hours the pain returned in full force. I could not extract more blood without hazard, and determined to treat the case as one of peritonitis—with opium, principally. Accordingly, 3 gr. doses of opium, with 2 or 3 grs. of calomel were given every three or four hours. The first dose brought about a profuse perspiration, and a complete subsidence of pain. Afterwards, a dose was ordered to be given whenever pain demanded. At the the same time warm fomentations were applied to the eye. Under this management, in a few days all inflammation subsided, and the case did well.

Case 192.—*Intermittent Fever, with Dropsy.*—Sept. 12th. Visited a young Indian woman, daughther of Mrs. Pot. On inquiry, found she had been prostrated with a severe intermittent fever for some weeks. She was residing on an alluvial bottom, near the margin of Illinois river. In addition to the periodic fever, she was afflicted with general anasarca, and also ascites—the abdomen being considerably distended, fluctuation palpable—and her condition was strikingly anæmic—the skin being pale and diaphanous, and the tongue and gums presenting a white, exsanguious appearance. The pulse was small and rapid.

It was considered useless to direct any remedy to the removal of the dropsical effusions, whilst the intermittent was progressing; quinine was therefore given, which procured an exemption from ague for two days.

15th. Again visited her, and repeated the quinine, in divided portions, as had been done before, which again seemed to subdue the febrile disease, but only for a day or two. Precip. carb. of iron, quinine, blue mass and diuretics were given. Under the use of the bi-tartrate of potassa and dulc. spts. of nitre, the dropsy diminished; but the frequent returns of periodic fever, at short intervals, rapidly prostrated her, and she died on the 25th; not from pressure of effused fluid, but from anæmia and exhaustion.

In this case the proclivity to febrile relapses was too profound to be changed by any remedy known to me.

CASE 193.—*Intermittent Fever.*—Sept. 13th. A child of Jeremiah Tucker had ague.

℞. Dulc. spts. nitre, every two hours during the hot stage.

S. quinine, 10 grs. in six portions; all to be taken in the stage of apyrexia. Jugulated. No relapse.

CASE 194.—*Infantile Remittent.*—Sept. 13th. A child of Wm. Bachman, (in town,) had continuous fever for several days before I was called. First saw it in the morning. Was informed that it was costive.

℞. Calomel 8 grs. This acted in the course of the afternoon.

S. quinine 15 grs., in six portions; to be given during the night and early part of the forenoon.

14th. Forenoon. Still some fever. Directed three more portions of quinine in continuation. Jugulated. No relapse.

CASE 195.—*Malignant Intermittent.*—Sept. 13th. Miss Susan Nave, aged about eighteen years, had been sick about two days. Chilly sensations had been experienced during forenoons, and lasted six hours or more, with cold extremities, palor of countenance, profound nausea and a pain of the most excruciating character in the right temple; the pulse very small and frequent. On the subsidence of this stage of sinking and oppression each day, the resulting febrile action had continued up to the ensuing paroxysmal hour, with but slight abatement. Arrived during the cold stage.

℞, S. morphine ¼ gr., immediately, and sinapisms to the legs and epigastric region.

S. quinine - 26 grs.
Piperine - 10 grs., divided into six portions.

One to be given every two hours, commencing late in the afternoon.

14th. Afternoon. No preceptible chill had taken place, but about the usual hour febrile excitement exacerbated, with a renewal of the pain in the temple, which had subsided during the night.

℞. S. quinine 26 grs., given as above. Jugulated. No relapse.

CASE 196.—*Diarrhœa.*—Sept. 14. C. B., a young lady, had been afflicted with a severe diarrhœa. She could not trace it to any irregularity of diet.

℞. Opium - - 1½ grs.
Camphor - 3 grs., three times a day.

A few doses allayed the morbid action of the bowels, and it did not return.

CASE 197.—*Remittent Fever.*—Sept. 14th. Wm. Butler, aged about twenty-one years, had been sick for a week; had sent for me at an early stage; I was absent, and another practitioner attended. He had taken about forty grains of the sulphate of quinine, irregularly; blue mass had been freely given, and had induced ptyalism. The bowels had acted freely, and, during the last twenty-four hours, rather frequently, from the combined effects of the blue mass and senna tea; tormina were frequent and depressing. For the last twelve hours quinine in 2 gr. doses had been given regularly every two hours. Febrile excitement was moderate, but never wholly disappeared.

℞. S. quinine - 15 grs.
S. morphine - 1 gr., divided into six portions.

One to be given every three hours, commencing at 9 o'clock, A. M. Jugulated. No relapse.

CASE 198.—*Remittent Fever.*—Sept. 14th. Mrs. Brown, wife J. W. Brown, had had continuous febrile excitement for several days, with very slight morning remissions.

℞. S. quinine 26 grs., in six portions; to be taken during the night and early part of the next forenoon, regardless of febrile excitement. Jugulated. No relapse.

CASE 199.—*Nausea.*—Sept. 14th. A negro woman belonging to Susan Candy, had been afflicted with distressing nausea for several days. There was no febrile action perceptible, and no derangement of function could be traced or elicited, except of the gastric.

℞. Two or three small doses of S. morphine, and small portions of creosote in water, were furnished, and under their use the nausea soon subsided.

CASE 200.—*Infantile Remittent.*—Sept. 14th. A negro child,

one year old, offspring of the preceding subject, had been afflicted with intermittent fever for more than two weeks.

℞. S. quinine, 10 grs. in six portions; all to be taken during the night and early part of the succeeding forenoon. Jugulated. No relapse.

Case 201.—*Diarrhœa.*—Sept. 14th. A little son of B. Ragsdale had been afflicted with diarrhœa for more than a week—and, although he had kept on foot, had lost flesh and cheerfulness.

℞. Dov. powders - - 3 grs.
Acet. of lead - 1 gr., 2, 3 or 4 times a day,

as the morbid action of the bowels might seem to indicate. A few doses sufficed to arrest the disease, and the boy speedily regained his flesh and cheerfulness.

Case 202.—*Hectic, Simulating Intermittent Fever.*—Sept. 15th. Wife of George Walker, (subject of case 186) for whom I prescribed on the 11th, is again prostrated with a fever, which her husband asserts comes on at regular quotidian periods. The quinine prescribed had only arrested the fever for two or three days; (I had learned that it was arrested, and had appended the result to the record of the case:) and now, for the first time, informed me that she had been troubled with a cough "for a long time." Diarrhœa had returned with the fever.

℞. S. quinine - - 20 grs.
Tannic acid - 10 grs., mixed and divided into

four doses; one to be taken every hour, commencing at break of day. The next day, 10 grs. were to be taken at once, at 9 o'clock, A.M. Opium, 1 gr., was to be taken three times a day.

Again the fever was cut short, for two or three days. I was no more consulted. Learned that she died some two or three weeks afterwards. Doubtless the disease was phthisis pulmonalis. I have several times seen undoubted cases of hectic fever mitigated by quinine.

Case 203.—*Congestive Intermittent Fever.*—Sept. 15th. Miss Ruth Foreman, aged about fifteen years, a resident student in the Cherokee Female Seminary; but on account of bad health, was conveyed home (in town.) The cold stage was of five or

six hours duration, and attended with nausea, vomiting, pale and livid countenance, and small, frequent pulse. Slight reaction was taking place when I saw her. Costive.

℞. S. morphine, ⅛ gr., immediately. At night to take 10 grs. calomel. The next morning to take 20 grs. S. quinine, in three equal portions—one every hour—so as to anticipate the paroxysmal period. But the febrile paroxysm again came on; and 25 grs. of S. quinine were directed, in six portions, to be taken through the night and early part of the forenoon of the following day. Jugulated. Relapsed several times, but finally subsided, under the use of quinine.

Case 204.—*Remittent Fever.*—Sept. 15th. Miss Sue M. Wolfe, aged sixteen; a resident student in the Cherokee Female Seminary, had been conveyed home, on account of fever, which was remittent. The remissions were distinct, but the cold stage was attended with nausea and vomiting; and the greater part of the hot stage by intense headache, insatiable thirst and great restlessness. She had taken a cathartic of patent pills, which had operated.

℞. S. morph., ¼ gr., in the hot stage, which was prevailing at the time of my visit. This mitigated headache and restlessness. Cold affusion was resorted to with a pleasant effect.

S. quinine, 20 grs., in three portions; to be taken the next morning, as in the preceding case; but another paroxysm occurred, 25 grs. of S. quinine were directed, in six parts, to be taken during the night and early part of the following forenoon. Relapsed several times, and finally succeeded, as in the preceding case.

Case 205.—*Remittent Fever.*—Sept. 15th. John Young, aged about forty-five years, had been sick for two weeks or more; febrile excitement had never wholly disappeared. He was emaciated and feeble; had taken purgatives and also domestic teas and nostrums. An increase of fever generally occurred about 10 o'clock, A.M.

℞. S. quinine, 26 grs., divided into four portions. One to be taken every hour, commencing early next morning. (I could not remain to administer the medicine myself, and there was no

one on whom I could depend for its administration through the night, or I would have divided it into a larger number of portions. Jugulated. Relapsed several times, in the intermittent form.

Case 206.—*Remittent Fever.*—Sept. 15th. A young man, son of the preceding subject, had suffered for three or four days with continuous febrile excitement, which had, as usual, been preceded by chilly sensations. There were morning remissions, followed, about 10 o'clock, A.M., by an increase of febrile action, (which was of a more vehement character than that of his father,) attended with headache, pain in the lumbar region, thirst and nausea. He, too, had taken cathartics and other remedies.

℞. The same as in the preceding case. Jugulated. Relapsed in the intermittent form, which, with the case of his father, will be hereafter noticed.

Case 207.—*Malignant Intermittent Fever.*—Sept. 16th. Mrs. Manning, aged about thirty years, had been sick three or four days, with intermittent fever of great severity. The cold stage at the commencement of each paroxysm had been short; the hot stage protracted, and of great severity. She was very much prostrated. Had taken a cathartic nostrum.

℞. S. quinine, 26 grs, in eight portions; one to be given every two hours, commencing at 6 o'clock, P.M. Jugulated. No relapse.

Case 208.—*Intermittent Fever.*—Sept. 6th. A child of the preceding subject was afflicted with a quotidian fever without any perceptible chill.

℞. S. quinine, 10 grs., in eight portions; to be given in the same manner as in the foregoing case Broken up. No relapse.

September 16th.—Case 209.—*Intermittent Fever.*

" " " 210 " "

Two children of Jackson Tiner had been afflicted with intermittent fever of a severe grade, daily, for a week or more. They had both taken cathartics, and also quinine; but on inquiry found that the latter had been given in insufficient quantity.

℞. S. quinine, 10 grs. for one, and 12 grs. for the other; each divided into six portions—all to be taken during the night and

early part of the succeeding forenoon. Arrested. No relapse.

Case 211.—*Masked Intermittent Fever, with cough.*—Sept. 16th. Visited Miss Catharine Brown, aged about twenty-two years. She complained of loss of appetite, languor and a harrassing cough, with but little expectoration. Saw her in the afternoon. Found a slight febrile movement present, of which she had not been aware; and on close inquiry found that the cough was periodic—commencing near 12, M., every day, and continuing till late in the night.

℞. S. quinine, 20 grs., divided into six portions; all to be taken during the night and early part of the following forenoon. Jugulated. There was no other paroxysm of cough. No relapse.

Case 212.—*Periodic Diarrhœa.*—Sept. 17th. H. D. Reese, aged about forty years, had been afflicted with diarrhœa for several days, during only a portion of each day. On inquiry found the disease to be periodical—commencing about 10 o'clock every day, and continuing until some time in the night, and attended with severe, griping pains. No febrile movement was perceptible.

℞. Opium - - - 1½ grs.
Acet. of lead - 3 grs., every four hours.

Two or three doses seemed to remove the disease; but the next day it occurred again.

℞. S. quinine, 25 grs., in six portions. All to be taken during the night and early part of the succeeding forenoon. Also S. morphine, ¼ gr., was given at night, to insure a quiet state of the bowels. Jugulated. No relapse.

Case 213.—*Remittent Fever.*—Sept. 17th. Eliza Hicks, aged about fifteen years, had suffered with continuous febrile excitement for several days, with slight morning remissions. Had taken several blue mass pills.

℞. S. quinine, 26 grs., in six portions; one every two hours, commencing at 9 o'clock at night. Jugulated.

(TO BE CONTINUED.)

ART. XXXII.—PROCEEDINGS OF THE NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION.

The Association met at Fireman's Hall, at 11 o'clock, A.M., yesterday, and was called to order by the President, Dr. G. B. Wood, of Pennsylvania. Dr. D. Tilden, of Ohio, Vice-President, occupied a seat upon the platform. Dr. Wm. Brodie, of Detroit, Secretary.

Dr. Pitcher, of Michigan, in behalf of the Committee of Arrangements, said:

Mr. President—In the name of the physicians of Michigan, who are here represented by delegates from their State, district and more local societies, we welcome the members of the American Medical Association to the State and city of our adoption.

As children who have wandered from the family altar, to improve their fortunes in new and distant lands, would meet with bounding hearts the patriarch of their early home, so we, whose lot has been cast in the forests of the West, now greet with kind emotion the delegates from the old colonial States, hallowed in our memories by their revolutionary associations, honored for the elegance and durability of their seats of learning, and cherished as the home or the birthplace of many of the most brilliant and highly cultivated intellects in our national domain.

With a fraternal attachment no less ardent, we receive the members coming from those other States of the confederacy, which, like our own, have a position among the stars of the Union, but by the accident of birth are excluded from a place among the stripes of our national escutcheon.

And to our brethren who are here by invitation, from the British provinces in America, with whom, from a common ancestry, we have derived, by inheritance, our best and earliest ideas of civil liberty, much of our literature, and many of the practical precepts which regulate our art, we offer a like and cordial reception.

Although actively engaged in the battle of life, and earnestly struggling to overcome the obstacles which, in an undeveloped country, lie in the way of professional success, we have striven,

like the devoted Parsee, to keep alive the fire which, in our youth, we kindled at the altars of those magi who now come—not like the wise men of the East, under the guidance of a new risen star, by acts of devotion to celebrate the advent of a Messiah—but to receive from us, on this ground, from which the footprints of the savage have scarcely been erased by the ploughshare of the white man, where the echoes of the boat-song of the lively Gascon may still be heard between the strokes of the paddle-wheel and the whistlings of the locomotive, the tokens of a sincere friendship, the acknowldgment of a legitimate paternity, and the homage due from filial and grateful hearts.

The student of our political history is well aware that, under the pressure of exterior force, we have been compelled, on five different occasions, to change our national colors, but never abjure the faith of our political sires—so now we intend steadfastly to stand by the true in medicine, under all the forms of temptation, as we will, under all the phases of political fanaticism, defend the ark of the covenant of our political fathers.

We pray that the meetings of this association, though purely scientific in its aim, may be so conducted as to become instrumental in promoting these great ends.

Again, gentlemen, we bid you, from whatever land or State, or section of the country you may have come, in the name of common brotherhood in science, a warm and cordial welcome.

The roll was then called by Dr. Wister, of Pennsylvania.

On motion of Dr. Thomson, of Delaware, a recess of fifteen minutes was taken to allow the delegates from the respective States to report one member from each State represented, as a committee to nominate officers for the ensuing year.

At the expiration of the recess the association was called to order, and the different State delegations then reported their choice, respectively, of a delegate to serve on the nominating committee, which was constituted as follows:

Maine.—N. P. Monroe.
New Hampshire.—H. Pierce.
Vermont.—C. L. Allen.
Massachusetts.—H. H. Childs.
Maryland.—P. Worth.
South Carolina.—E. Geddings.
Tennessee.—J. B. Lindsley.
Kentucky.—W. S. Sutton.

Rhode Island.—J. E. Warren. *Minnesota.*—C. W. Le Boutillier.
Connecticut.—David Harrison. *Michigan.*—M. Gunn.
New York.—William Rockwell. *Ohio.*—Thos. W. Gordon.
New Jersey.—L. A. Smith. *Indiana.*—Dr. Winton.
Pennsylvania.—John Neill. *Illinois.*—H. Noble.
Delaware.—J. W. Thomson. *Wisconsin.*—W. H. Brisbane.

After the Nominating Committee had retired, Dr. Pitcher, of Michigan, from the Committee of Arrangements, submitted the following report:

In conformity to the domestic and social usages of the place of meeting, the committee have to suggest that the sessions of the Association take place in accordance with the following plan, and that they commence and terminate each day at the hours designated therein:

Tuesday.—Morning session begins at 9, A.M., and ends at half-past 12, M. Afternoon session begins at 2, P.M., and ends at 5, P.M.

Wednesday.—Morning session begins at 9, A.M., and ends at half-past 12, M. Afternooon, no session.

Thursday.—Morning session begins at 9, A.M., and ends at half-past 12, M. Afternoon session begins at 2, and ends at 5, P.M.

Friday.—Morning session begins at 9 o'clock, A.M.

This arrangement of the hours of meeting and adjournment conforms, also, to the suggestions contained in the resolutions of Dr. N. S. Davis, of Illinois, and which were, on his motion, referred to this committee for their consideration by a vote of the Association. Regard for the mover of the resolutions, and the authority of the body by which they were submitted to us, requires from the committee a respectful reply. Your committee, in view of the existing state of our professional literature, feel reluctant to advise a departure from the present mode of laboring to promote a higher degree of culture in those preparing to become members of the medical profession, and to establish in those already engaged in its duties a habit of recording the results of their observations. They think that the effects of such a change as is contemplated in the resolutions of Prof. Davis, and the more

amplified expression of his idea contained in the address of the hen President, Dr. Pope, of Missouri, delivered at Philadeltphia, in 1855, can easily be foreseen. To a few, who are gifted with colloquial powers, and to others who have undergone the discipline required to fit them for public debate, the interest of the meetings, conducted upon the plan proposed in the resolutions, would be greatly increased; but as the great body of the Association would (voluntarily, it is true,) be excluded from participation in these exercises, the enthusiasm which now characterizes these anniversaries would subside, and with it the professionional *esprit du corps* which has already been developed through the instrumentality of the Association. We presume that the objects for which this organization was effected have not been lost sight of by the majority of its members; neither can it be pretended that those purposes have been so far accomplished as to justify us in laying it aside, or in diverting it from its original design.

Your committee feel that the profession has no right to rail at the public for misappreciation of it, so long as we continue to admit men into its folds destitute of that knowledge, both in nature and degree, necessary to make a decent appearance in general society, or to fit a man for the more ordinary and less responsible pursuits of life. From the early records of the Association, it appears that this conviction, on the part of the profession in the United States connected with the design of reforming, in certain particulars the medical schools of our country, led to its organization in 1847, and until its mission in both respects has been accomplished, the committee would reluctantly recommend the adoption of any measure tending, in their judgment, to divert it from the design of its creation. Thus far the influence of the Association has gradually extended itself into the rank and file of the profession. It has increased the number of writers, given an impulse to the medical mind, and encouraged a useful and laborious class, gratified to observe and willing to submit their observations to the public, because they can be incorporated into the body of transactions without being subject to a sifting criticism. It is true, that in this way, arti-

cles have been printed that did not always inure to the credit of the Association, but at the same time, and by that means, motion and fertility have been given to minds that would have lain fallow and unproductive, which the dread of the conspicuity belonging to a mental gymnasium would have driven into a deeper obscurity. The committee, however, while they would resist any tendency to radicalism in their own opinions, cannot dismiss the subject without expressing their belief that, in order to secure the objects of our organization, it is as necessary to increase the breadth and depth of its base as to elevate the shaft designed to spring from it—for without such preparation, the superstructure, however beautiful in aspect, would be of transient duration.

Having arranged the hours for meeting and adjourning, so as to place it in the power of the Association to adopt or reject, without inconvenience, the proposition of Dr. Davis, the committee respectfully ask to be excused from submitting a distinct proposition on the subject.

By order of the Committee of Arrangements.

Z. PITCHER, Chairman.

The report was accepted.

The President announced the death of the eminent Dr. John C. Warren, of Boston, Mass., in that city, on Sunday morning.

Dr. Childs of Mass., felt compelled to say a few words in this connection. He had been associated with the deceased for more than half a century, and should feel that he had been derelict of duty if he neglected to speak in his laudation. Dr. Warren was the nephew of Joseph Warren, who fell gloriously at the battle of Bunker Hill. He was at the head of his profession in Massachusetts—had been President of the State Medical Society, and occupant of other elevated medical positions. His professional reputation was high, and his personal reputation spotless. His fame was not confined to Massachusetts. Though devoted to medical science, he was not limited to that alone, but paid attention to every branch of literature and art. If young members of the profession would be useful and eminent, they should follow the example of Dr. John C. Warren. To the older, the speaker would point out Dr. W.'s moral character as an exemplar.

Such a life as his inevitably terminates in a death beautified by a surety of eternal happiness.

Dr. Gross, of Kentucky, made some remarks eulogistic of the deceased. He alluded to his high reputation—a reputation, he observed, not confined to America, but extending to every corner of the civilized world. Dr. Warren was the Nestor of American surgery. Dr. G. concluded by offering the following:

Resolved, That a committee of five be appointed to draft resolutions expressive of the feelings of this Association at the loss of their late associate, Dr. John C. Warren.

The resolution was adopted, and the President appointed, as such committee, Dr. Gross, of Kentucy, Dr. Childs, of Massachusetts, Dr. Wood, of New York, Dr. Pitcher, of Michigan, and Dr. Geddings, of South Carolina.

On motion, the Association adjourned to 2, P.M.

AFTERNOON SESSION.

The President called the Association to order at 2 o'clock.

The Secretary read a letter from Dr. Grafton Tyler, of the District of Columbia, one of the Vice-Presidents, excusing his absence.

He also read letters from the State Medical Society of Tennessee, and from the University of Nashville, inviting the Association to hold its next annual session at Nashville, Tennessee; also, one tendering the use of the Hall of Representatives, of that State, for the purposes of said session.

On motion of Dr. Brodie, of Michigan, referred to Committee on Nominations.

The Committee on Nominations submitted the following report:

The Committee on Nominations unanimously nominate the following officers of the American Medical Association for the ensuing year:

President—Dr. Zina Pitcher, of Detroit.

Vice-Presidents—Drs. Thomas W. Blatchford of New York; Wm. K. Bowling, of Tennessee; E. Geddings, of South Carolina; W. H. Brisbane, of Wisconsin.

Secretaries—Drs. Wm. Brodie, of Mich.; R. C. Foster, of Tenn.

Treasurer—Dr. Casper Wister, of Pennsylvania.

The report was accepted, and the nominations unanimously confirmed.

On motion of Dr. Atlee, of Pennsylvania, the President was requested to deliver his annual address.

At the conclusion of the address, on motion of Dr. Atlee, of Pa.,

Resolved, That the thanks of the Association be presented to our late President for the able and interesting parting address he has just delivered, and that he be requested to present to the Committee of Publication a copy, for preservation in our transactions.

On motion of Dr. Atlee, of Pa.,

Resolved, That a committee of three be appointed to inform the President and Vice-Presidents elect of their election, and conduct them to their seats.

The President appointed, as such committee, Drs. Atlee, of Pa., Reeves, of Ohio, and Sutton, of Ky.

Upon taking the chair, Dr. Pitcher said:

Although fully aware of my indebtedness, for this distinction, to your observance of a custom equivalent in force to positive law, of selecting your presiding officer, in each successive year, from the State in which the meeting of the Association is held, I feel myself more honored by your partiality than if I had received the same mark of respect from any other body of men known to the annals of our country.

This sentiment of regard for the body towards which I now hold, by this act of yours, so delicate and interesting a relation, has been inspired by a contemplation of the ideal of the physician, and strengthened by my growing acquaintance with the individuals who compose it.

Being unaccustomed to presiding in deliberative assemblies, I shall throw myself upon the indulgence of the Association, and rely upon the kindness and intelligent co-operation of the individual members for assistance in performing the duties of the chair.

While thanking you most cordially for this expression of confidence, I can only assure you that such abilities as I possess shall be devoted to the prosperity of the Association and the harmony of its proceedings.

On motion of Dr. Gunn, of Mich.,

Resolved, That the resolution passed at St. Louis, requiring a majority of the Committee of Publication to be appointed from residents of the place where the meeting is held, be repealed.

Dr. Phelps, of New York, offered the following:

Whereas, The pleasure and satisfaction of attending the deliberations of this Association would be greatly enhanced, the duties of the secretaries and reporters facilitated, and order at the same time secured, by the observance of two things, to wit: first, that the audience be put in possession of the name and residence of the speaker; and secondly, that they be enabled distinctly to hear what he has to say: therefore,

Resolved, That no one be permitted to address the Association except he shall have first given his name and residence, which shall be distinctly announced from the chair, and the member be required to go forward and speak from the stand, and not more than ten minutes at one time.

A motion to lay on the table was lost. The resolution was then adopted.

At the request of Dr. Gross, of Ky., his report upon "The Causes that Retard Medical Education and Literature," was made the special order for Wednesday at 10 o'clock.

Dr. Palmer, of Ill., from the Committee on Prize Essays and Volunteer Communications, submitted the following:

"The Committee on Prize Essays and Volunteer Communications," report, that some months since they issued a card, which was extensively published in the medical jounals, setting forth the terms upon which essays intended for prizes would be received; but that the number of papers presented has been but four.

By referring to the past records of the Association, it is found that the numbers received by preceding committees have been, in 1852, 16; in 1853, 15; in 1854, 9; in 1855, 6; in 1856, 4.

Your committee beg leave to call attention to this almost regular and quite rapid decrease in the number of essays presented, for the purpose of having the Association consider whether there be not danger that the number which may hereafter be furnished will be so small as to afford insufficient range of comparison and choice to cause the preference shown to be much valued, if, indeed, presentations do not cease altogether, and whether any means should be devised for preventing such a result.

The essays received by your committee have been subjected to a careful examination, and while admitting that they all possess

a degree of merit which would render them suggestive and useful if given to the profession, still, in their opinion, but one manifests that evidence of careful and laborious investigation, that wide scope and rigid accuracy of logical reasoning, that chasteness of expression and artistic skill in the presentation of the subject, as to furnish sufficient claim for awarding a prize by this body.

But one prize is therefore awarded. The essay selected for this honor bears the title—"An Essay on the Arterial Circulation."

It is regarded by the committee as possessing the merits just alluded to, and while not wishing to give an unqualified endorsement of all the views which it contains, they regard it as possessing not only interest in its physiological and scientific relations, but also real value in its pathological and practical bearings.

The production has considerable length, and by the fullness with which the views advanced are discussed, it partakes as much of the nature of a treatise as an essay. It has at least one quality which Lord Bacon considered necessary to a treatise as distinguished from an essay—it required a degree of leisure on the part of the writer, and will require the same on the part of the reader for him fully to appreciate its value.

The essay bears the motto—"*Una est Veritas.*"

(Signed,) A. B. Palmer, Ch'n.
Samuel Denton.
Silas H. Douglass.
Ab'm Sager.
E. Andrews.

On breaking the seal of the accompanying packet, Dr. Henry Hartshorn, of Philadelphia, Pa., was found to be the successful essayist.

The report was accepted.

Dr. Bratchford, of New York, from the committee on "Hydrophobia, and the Connection of the Season of the Year with its Prevalence," read a report thereon. The committee, in conclusion, submitted the following resolution, which was adopted:

Resolved, That the Secretary transmit to the Governor of each State a copy of the statistical part of this report, with the respectful request that he would bring the subject before the Legislature of the State

over which he presides, that in their wisdom they may devise and unite upon a plan by which the evil may be mitigated, if not removed.

The Committee on Nominations reported in favor of holding the next annual meeting of the Association at Nashville, Tenn.

Dr. Gross, of Ky., moved to strike out "Nashville, Tenn.," and insert "Louisville, Ky." He thought Nashville, at present, difficult of access.

Drs. Geddings, of S.C., and Lindsley, of Tenn., advocated the adoption of the report.

Dr. Gross withdrew his amendment, and the report was adopted.

Dr. Wister, of Penn., from the Committee on Publication, made the annual report. It states that the first copies of the transactions of the last session of the Association were issued on the 10th of November, 1855; that 1,100 copies were printed; that the aggregate expense of printing, illustrating and binding, was $1,922.70; that the distribution of the volume was effected, in every possible instance, by express; that Drs. C. Hooker, of Ct., Alden March, of Albany, J. L. Atlee, of Pa., W. Brodie, of Mich., C. B. Gibson, of Richmond, E. L. Beadle, of N.Y., H. W. Dessaussure, of S.C., C. A. Pope, of Mo., D. H. Storer, of Mass., T. G. Richardson, of Ky., J. Moran, of R.I., T. Miller, of D.C., F. E. B. Hentze, of M.D., L. P. Bush, of Del., Z. Pitcher, of Mich., and J. B. Lindsley, of Tenn., have rendered essential service to the Association—some in procuring subscriptions to the volume, and all by cordial co-operation in its distribution; that it is important to secure efficient co-operation in every State by the appointment of gentlemen whose duty it shall be to aid in procuring subscriptions for and circulating the transactions; that Connecticut is especially to be commended for her services in this particular; that not a little embarrassment was experienced by the committee in restoring to the list of permanent members the names of those who had been left off by order of the Association for non-payment of assessments; that they had endeavored, however, by careful comparison of the various lists, to supply all omissions; that the committee had been reluctantly obliged to omit from the transactions two valuable reports on ep-

idemic diseases—by Dr. L. H. Anderson, of Ala., and Dr. E. D. Fenner of New Orleans; but as they had not been presented to the Association, and acted on by that body, there was no other alternative; that the following resolution, passed at the last session, should be strictly enforced:

Resolved, That hereafter, beginning with the session of 1856, no report, or other paper shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before the first of June.

The report further states that the number of volumes of transactions now remaining on hand, is as follows: of Vol. I., 41; of Vol. II., 9; of Vol. III., 32; of Vol. IV., 7; of Vol. V., 316; of Vol. VI., 66; of Vol. VII., 120; of Vol. VIII., 351; that some of the leading journals abroad have expressed a strong desire to complete their sets, and it rests with the Association to determine whether the missing numbers shall be supplied; that, as only seven complete sets of the transactions are now in the possession of the Association, the committee recommend that no copy of the eight volumes which is necessary to the complete sets now remaining, shall be disposed of separately, or with any number of volumes short of a complete set.

Dr. Atlee, of Pa., made some remarks upon the report, in the course of which he stated that the Smithsonian Institution had been offered as a permanent place of session for the Association. He concluded by moving that the Committee on Publication preserve five complete sets of the proceedings. Carried.

Dr. Wood of Philadelphia, moved to refer the nomination of standing committees to the Committee on Nominations. Carried.

The same gentleman made a request in behalf of Dr. Hamilton, that the committee of which Dr. H. is chairman may be continued for another year, it not being prepared to report at present. Granted.

Dr. Breckenridge, of Ky., stated that the Committee on Medical Literature was ready to report.

The President suggested that the reading of the report follow that of the report of Dr. Gross, which had been made the special order for Wednesday, at 10, A.M.

Dr. Palmer, of Chicago, stated that the Committee on Plan of Organization for State and County Medical Societies was ready to report.

Dr. Pomeroy, of N.Y., moved to reconsider the resolution requiring a member, when speaking, to stand upon the platform, and not to occupy more than ten minutes in his remarks. Lost.

Dr. Smith, of N.J., moved that that portion of the resolution requiring members, when speaking, to take the stand, be rescinded. Carried.

Dr. Atlee, of Pa., moved to refer the prize essay of Dr. Hartshorn on Arterial Circulation, and the report of Dr. Blatchford on Hydrophobia, to the Committee on Publication. Carried.

Dr. Wister of Pa., the Treasurer, read his annual report. It recommends that the Treasurer be requested, at an early date after the adjournment of the present meeting, to address a circular to each permanent member, announcing the abrogation of the resolution of 1854—making a yearly subscription to the transactions obligatory—and the consequent restoration to membership of all those dropped from the published list of that year, —advertising, also the practicability of procuring back numbers of the transactions, with information as to the cost at which the series of volumes may be rendered complete, or an entire set furnished by the Association.

The account of the Treasurer with the Association is as follows:

Amount received - - - - - - - - -	$3,584 26
" paid out - - - - - - - - -	2,633.74
Balance on hand - - - - - -	$950.52

The correctness of the account is certified by the proper committee.

The report was accepted, and referred to the Committee on Publication.

Dr. McNulty, of the New York Academy of Medicine, offered a resolution, that a committee of one from each State be appointed by the Committee on Nominations, to prepare, and report to the Asosciation during its present session, an address to the people of the United States, setting forth the strong claims the

medical profession have on their respect, gratitude and confidence.

Dr. McNulty explained the purpose for which he offered the resolution. Many people, he said, had a prejudice against the medical profession for holding to the dignities of their calling, and entertained the idea that the science of medicine was a collection of absurdities and superstitions. He wanted to show clearly that this is not the fact, and, in this view, he thought the address proposed would have a beneficial effect.

Dr. Kittredge moved to amend the resolution by making it read that every member of the Association should take the stump and defend the cause.

After a few other remarks the resolution was withdrawn.

Dr. Gunn, of Mich., reported the following names of members by invitation: Dr. N. P. Curtis, of Tecumseh, Mich., proposed by Dr. M. A. Patterson, of Tecumseh; Dr. C. West, proposed by Dr. Z. Pitcher, of Detroit; Dr. James Bronson, of Newton Falls, Ohio, proposed by Dr. Thomas W. Gordon, delegate from the Ohio Medical Society; Dr. Benjamin Stanton, of Salem, Ohio, proposed by Dr. Geo. Mendenhall, of Cincinnati; Dr. Eames, of Ohio, proposed by Dr. Stockwell; Dr. N. K. Maniates, of Marshall, proposed by Dr. M. Gunn, of Detroit. The report was adopted.

The President read a communication from Dr. Stille, chairman of the committee appointed last year to consider the subject of extending the lectures of each chair in medical schools over a period of two years, stating that the views of medical institutions had as yet been imperfectly ascertained, and asking a continuance of the committee. Granted.

Dr. Watson, of N. Y., moved that the Committee on Epidemics meet immediately after the adjournment. Agreed to.

The President read an invitation to the Association to attend the session of the American Association for the Advancement of Science, at Albany, in August next,—at which time also, the Dudley Observatory will be inaugurated, and an address delivered by Hon. Edward Everett. The invitation was accepted.

The Association then adjourned to meet this morning at nine o'clock.

SECOND DAY'S PROCEEDINGS.

The Association was called to order by the President, at nine o'clock this morning.

The minutes were read, corrected, and approved.

Dr. Wister, of Pa., read the list of delegates who had registered their names since the last report.

The Secretary read communications from the following gentlemen, asking an extension of time in which to report upon the subjects named:

Dr. A. J. Simmes, of N. Y.,—"Coroners' Inquests."

Dr. J. Taylor Bradford, of Ky.,—"Treatment of Cholera."

Dr. J. M. Reese, of N. Y.,—"Infant Mortality."

Dr. E. R. Peaslee, of Me.,—"Inflammation, &c."

Dr. J. W. Corson, of N. Y.,—"The Causes of the Impulse of the Heart, and the Agencies which Influence it in Health and Disease."

Dr. Mark Stephenson, of N. Y.,—"The Treatment best adapted to Each Variety of Cataracts, with the Method of Operation, Place of Election, Time, Age, &c.

Dr. Beech, of Mich.,—"Medical Topography, and Epidemics."

Dr. J. C. Hutchinson, of N. Y.,—"The Anatomy and Histology of the Cervix Uteri."

Referred to Committee on Nominations.

The Secretary announced that he had received the following resolution adopted at the last meeting of the New York State Medical Society:

Resolved, That the members of the American Medical Association be invited to attend the semi-centennial celebration of this society, which will occur on the first Tuesday of February, 1857.

The invitation was accepted.

The Secretary read the following communication, dated April 7, 1856, from the Secretary of the Ohio State Medical Society:

SIR:—At the annual meeting of this society, held in June last, at Zanesville, Ohio, the following resolutions were adopted, and I was directed to furnish you with a copy of the same:

Resolved, That the resolution offered by Dr. Grant, (a member of this society, but not at this or at that time a practitioner of medicine, but a lawyer,) at the last session of the society, viz: "That it is not

derogatory to medical dignity, or inconsistent with medical honor, for medical gentlemen to take out a patent-right for surgical or mechanical instruments," was offered when many members had left for their homes, and is not, therefore, the sense of the society.

Resolved, That the said resolution is in direct opposition to the code of medical ethics adopted by this society, and therefore be it further

Resolved, That said resolution, offered by Dr. Grant, and adopted by the society, be and is hereby, rescinded.

The communication was ordered to be placed upon the minutes.

The Secretary read a communication from Dr. Hamilton, of Buffalo, N. Y., transmitting the second part of a report upon Deformities after Fracture and Dislocations, and asking for a correction of the minutes of last session in regard thereto. Dr. H. also asked that he be permitted to incorporate, in a volume upon the subject he is preparing for publication, that portion of the report already published by the Association.

On motion of Dr. Brodie, of Mich., the minutes were amended.

Dr. Atlee, of Pa., offered a resolution that the request of Dr. H., in regard to the publication of the report, be granted.

Dr. Lindsley, of Tenn., opposed the resolution. A similar request was denied at the session of the Association held at St. Louis.

Dr. Palmer, of Ill., moved to refer the matter to a special committee. Carried.

The President appointed as such committee, Drs. Palmer, of Ill., Atlee, of Pa., and Hills, of Ohio.

The following gentlemen were admitted as members by invitation of the Association: Drs. Edward Cox and S. B. French, of Battle Creek, Mich., introduced by Dr. Gunn; Dr. O'Donohue, of Battle Creek, introduced by Dr. Coates; Dr. G. W. Carhartt, of Wayne, N. Y., introduced by Dr. Cone; Dr. S. A. Scott, of Woodstock, C. W., introduced by Dr. Stewart; Drs. E. R. Thornton, of Belleville, Mich., Holly, of Shiawassee, Michigan, Foster, of Undadilla, Mich., and W. H. Stevens, of Mich., introduced by Dr. Denton; Dr. Thomas M. Franklin, of Lafayette, Ind., introduced by Dr. Rockwell.

Dr. Gunn, of Michigan, moved that those gentlemen from Canada, who are here by general invitation, be admitted in a body and be requested to take seats on the platform during this morning's session. Carried.

The following gentlemen complied with the invitation:

Dr. E. M. Hodder, F. R. S., Eng., Prof. of Midwifery and Diseases of Children, Trinity College, Toronto.

Dr. J. H. Richardson, M. R. C. S. Eng., Examiner in Anatomy, University of Toronto.

Dr. Norman Bethune, M. R. C. S. of Eng. Prof. of Anatomy, Trinity College, Toronto, C. W.

Dr. Worthy Haswell, M. R. C. of Surgery, Eng.

Dr. A. K. Dewson, College Physicians and Surgeons, N. Y., Licentiate of Province of the Canadas.

Dr. Geo. Coatsworth, Medical Department University of Buffalo, Licentiate of Province of the Canadas.

Dr. John Tarquand—Woodstock, C. W.

In receiving them upon the platform, the President, Dr. Pitcher, said he was happy to be the instrument of celebrating the nuptials by which we effect a scientific re-union of the two members of the Anglo-Saxon race, which have so long been separated by the political relations having their origin in the separation of the American colonies from the English crown.

Dr. Hodder, in behalf of his Canadian brethren, thanked the Association for the courtesy and kindness extended to them.

Dr. Sutton, of Ky., offered a resolution that 1,000 copies of the address of the late President, Dr. Wood, be published.—Adopted.

On motion of Dr. J. B. Lindsley, of Tenn.,

Resolved, That a committee of three be appointed by the Chair, to prepare a suitable minute in reference to the death of our late Secretary, Dr. P. C. Gooch, of Richmond, Va., who fell a martyr while contending with the pestilence in Norfolk, in 1855.

The President appointed as such Committee, Drs. Lindsley, of Tenn., Thompson of Del., and Mendenhall, of Ohio.

Dr. Gross, of Ky., from committee appointed the day previous, reported the following preamble and resolutions relative to the death of Dr. J. C. Warren of Boston:

Whereas, It has pleased Almighty God to remove from the scene of his earthly labors our late fellow-member, Dr. John C. Warren of Boston, formerly President of this Association, and for many years Professor of Anatomy and Surgery in Harvard University;

And Whereas, It is just and proper that, when a great and good man dies, his memory should be cherished by his fellow citizens, and transmitted unimpaired to posterity for the encouragement of future ages; therefore,

Resolved, That this Association has learned with profound regret the news of an event which has deprived the American medical profession of one of its oldest, most useful and most illustrious members —American surgery one of its greatest ornaments—science one of its best friends—and humanity one of its noblest benefactors.

Resolved, That the life of Dr. John C. Warren affords an example of a man who, notwithstanding the possession of ample riches, devoted himself, heart and soul for upwards of half a century, to the cultivation and advancement of his profession, and to the good of the human race.

Resolved, That this Association deeply sympathises with the family of Dr. Warren in their bereavement, and that the Secretary be requested to transmit to them a copy of these proceedings.

The preamble and resolutions were adopted and referred to the Committee on Publication.

Dr. Gross, of Ky., read a report on "The Causes which Impede the Progress of American Medical Literature." In conclusion, he submitted the following resolutions:

Resolved, That this Association earnestly and respectfully recommends: 1st. The universal adoption, whenever practicable, by our schools, of American works, as text-books for their pupils. 2d. The discontinuance of the practice of editing foreign writings. 3d. A more independent course of the medical periodical press towards foreign productions, and a more liberal one towards American; and, 4th. A better and more efficient employment of the facts which are continually furnished by our public institutions for the elucidation of the nature of diseases and accidents, and indirectly, for the formation of a vigorous, and an independent national medical literature.

Resolved, That we venerate the writings of the great medical men, past and present, of our country, and that we consider them as an important element of our national medical literature.

Resolved, That we shall always hail with pleasure any useful or valuable work emanating from the European press, and that we shall always extend to them a cordial welcome, as books of reference, to acquaint us with the progress of legitimate medicine abroad, and to enlighten us in regard to any new facts of which they may be the repositories.

Dr. Phelps, of New York, moved that the report and resolutions, as a whole be adopted.

At the suggestion of a member, the question was divided.—The report was adopted.

Upon the reading of the first resolution, a member proposed

to substitute "just" for "liberal," in line 8. Dr. Gross accepted the amendment.

Dr. Yandel, of Ky., moved that the resolutions be made the special order for Thursday morning. Lost.

Dr. Cobb, of N. Y., was opposed to the resolutions. If adopted and sent out to the world, they savor too much of Know-Nothingism to make them palatable. (Sensation.)

Dr. Leidy, of Pa., was in favor of leaving to teachers of medicine the selection of their own text-books.

Dr. Davis understood there was another report touching upon the subject—that upon "American Medical Literature," by Dr. Breckenridge, of Ky. He moved to lay the resolutions upon the table until that report was read. Carried.

The Secretary read a communication from Dr. P. A. Jewett, of Conn., chairman of the Committee to Procure Memoirs of the Eminent and Worthy Dead. Referred to Committee on Nominations.

Dr. Breckenridge, of Ky., read a report upon American Medical Literature.

On motion of Dr. Hooker, it was accepted and referred to the Committee on Publication.

The Association then adjourned to this morning at 7 o'clock.

THIRD DAY.—MORNING SESSION.

The Association was called to order by the President, at 9 o'clock.

The minutes were read, corrected and approved.

A communication from Dr. Worth, of Md., relative to a report upon the Medical Topography of the Eastern Shore of Maryland, and one from Dr. Thompson, Ky., relative to a report on "Chloroform," were referred to the Committee on Nominatians.

The Secretary read a letter from E. S. Lemoine, of St. Louis, enclosing an autograph letter from M. Dubois.

The Secretary read a communication from J. C. Holmes, Esq., the Secretary of the Michigan State Agricultural Society, presenting to the Association twenty-five copies of the transactions of the society for 1853, and also the same number of the transactions for 1854.

Dr. Brodie, of Mich., moved that the thanks of the Association be returned therefore, and that one copy be presented to each State represented. Carried.

On motion, Dr. McGugin, of Iowa, was appointed a member from that State of the Committee on Nominations.

On motion of Dr. Atlee, of Pa.,

Resolved,—That the President shall be authorized, annually to appoint delegates to represent this Association, at the meetings of the British Association and the American Medical Society of Paris, and such other scientific bodies in Europe as may be affiliated with us.—Adopted.

Dr. Gluck, of New York, offered the following:

Whereas, During the present year a Medical Congress is to be held in Europe; therefore

Resolved,—That the American Medical Association send to that congress four delegates, representing the four sections of the Union.

Dr. Davis, of Ill., thought it might be necessary and proper to send a greater number than four. He moved to lay the resolution on the table. Carried.

Dr. Clendenin offered the following:

Resolved,—That a committee of one be appointed, for a period of three years, with instructions to report progress at each annual meeting of this Society, to investigate the etiology and pathology of epidemic cholera, and that said committee be allowed to add any other members to the same which they think may be necessary to further the objects of the appointment.

On motion, referred to the Committee on Nominations.

On motion of Dr. Mendenhall of Ohio.

Resolved,—That the Secretary be instructed to strike the name of C. H. Cleveland from the list of permanent members of this Association.

On motion of Dr. Atlee, of Pa.,

Resolved,—Tnat the name of James R. McClintock be stricken from the list of permanent members.

On motion of Dr. Bissell, of New York.

Resolved,—That this Association has learned, with deep regret, the death of one of its members, Dr. Theodore Romeyn Beck, of Albany, N. Y., whose whole life has been devoted to the attainment and promotion of medicine and general science, and that we do hereby express our high appreciation of the excellencies of his character, distinguished by its simplicity, integrity and firmness of purpose, and by the extent and variety of his acquirements in medical as well as in almost every other department of science.

Resolved,—That the above resolutions be referred to the committee, to procure memorials of the eminent and worthy dead, and that they be requested to procure a memoir of the late Dr. Beck, to be published in the transactions of the Association.

Dr. Bloodgood, of Ill., offered the following:

Resolved,—That the constitution of this Association be so amended as that hereafter the president shall be elected by ballot, and shall not be a resident of the State in which he is elected.

On motion of Dr. Watson, of New York, laid on the table.

Dr. Winster, of Pa., offered the following, which was adopted:

Resolved,—That the invitation to gentlemen of the medical profession of Canada, extended to them by the American Medical Association, at its session in Philadelphia, be renewed for the meeting at Nashville, Tenn.; and that this Association may be safe from the introduction of unsuitable persons, it is recommended that gentlemen presenting themselves from the province of Canada, should be provided with a letter of introduction to this Association from one of the following gentlemen: Drs. Tarquand, A. Scott, Woodstock, Canada; Drs. Hodder, Bethune, Richardson, Bonell, Haswell, Widmer, Beaumont, Herrick, of Toronto; Drs. O'Reilly, Craiggie, Duggan, of Hamilton; Dr. Sampson of Kingston.

Dr. Phelps, of New York, offered the following:

Whereas, It has pleased the All Wise, but Inscrutable Providence, to visit the city of Norfolk, Va., and vicinity, with a desolating pestilence, equal, or surpassing any recorded in ancient or modern times, and by which, in a few weeks, forty physicians, either residents or those from abroad, who had promptly rushed to the rescue, (among the number of whom was our late Secretary and associate, Dr. Gooch, of Richmond,) had been swept away, therefore,

Resolved,—That such an instance of signal and unflinching devotion to the cause of science and of humanity, demands at the hands of this national Association a passing expression of their high admiration of this—another memorable instance of the unparalleled sacrifices of the profession to the interests of the healing art and of the race.

Resolved,—That this minute be incorporated in our transactions. Adopted.

On motion of Dr. Palmer, of Ill., Rt. Rev. Samuel A. McCoskry, Episcopal Bishop of this diocese, was invited to a seat upon the platform.

The like courtesy was extended to Dr. Mussey, formerly President of the Association.

Dr. Stocker, of Pa., offered the following amendments to the constitution:

Amend article 3, so that it shall read: "Article 3. The regular meetings of the Association shall be held annually, and commence on the first Tuesday of May. The Association shall meet biennially in the city of——. The place of meeting for the intermediate year shall be determined by a vote of the Association."

Amend article 4, by providing for one permanent and two assistant secretaries, and also specifying the duties, &c., of each.

Laid on the table under the rule.

Dr. Dorsey, of Ohio, offered the following:

Resolved,—That in May, 1858, and every third year thereafter, this Association meet at Washington city, and that the present officers be requested to correspond with the Board of Managers of the Smithsonian Institute, in regard to furnishing necessary rooms for the keeping of the archives of the Association.

Laid on the table under the rule.

On motion of Dr. Sheets,

Resolved,—That it is derogatory to the dignity of the medical profession to notice the works of irregular practitioners in our medical periodicals.

Dr. Davis, of Ill., moved that reports be made the special order. Carried.

Dr. Watson, of N. Y., moved to reconsider the last vote, in order to take up the resolutions attached to the report of Dr. Gross, of Ky., upon the "Causes which Retard American Medical Literature." Carried.

The resolutions were taken up; the question being upon their adoption.

Dr. Gross read extracts from his report, explained the intent of the resolutions, insisted upon their necessity, and advocated their adoption.

Dr. Davis, of Ill., was opposed to adopting any report. There were now before the Association two reports, [the one by Dr. Gross, of Ky., and one by Dr. Breckenridge, of Ky.,] presenting directly adverse views. He thought both should be accepted and referred to the proper committee—nothing more.

Dr. Breckenridge, of Ky., said the point at issue is—whether the Association will favor the sectionalism or the universality of medicine. If Dr. Gross's report and resolutions are adopted we decided in favor of the former.

Dr. Cobb, of N. Y., foresaw the difficulty that would arise in adopting Dr. Gross's report the day previous.

Dr. Watson, of N. Y., moved to reconsider the vote by which the report was adopted. Carried.

He then moved that the report be accepted. Carried.

On motion of Dr. Atlee, of Pa., the report and resolutions of Dr. Gross, and the report of Dr. Breckenridge upon "American Medical Literature," were referred to the Committee on Publication.

Dr. Palmer, of Ill., from special committee, to which was referred the communication of Dr. Hamilton, reported the following resolution, which was adopted:

Resolved,—That leave be granted to Dr. F. H. Hamilton, to make use of the materials of his report on "Deformities After Fractures," which is in course of publication by this Association, in his anticipated work upon "Fractures and Dislocations."

Dr. A. B. Palmer, from the Committee on Plans of Organization for State and County Medical Societies, presented a lengthened and able report, containing numerous useful suggestions, with outlines for the proper organization of local societies, and a series of resolutions in accordance with the views enforced in the report. Accepted, and referred to the Committee on Publication.

On motion, the resolutions were temporarily laid on the table for further action by the Convention.

Dr. Davis, of Ill., Chairman of Special Committee, reported on "The Changes in the Composition and Properties of the Milk of the Human Female, Produced by Menstruation and Pregnancy," in a paper containing numerous valuable details of much interest to the profession and the public, obtained by careful examination and comparison, and showing conclusively the ill effects of lactation, especially during the latter of the periods referred to. Accepted, and referred to Committee on Publication.

Dr. Charles Q. Chandler, of Missouri, who was to report on "Malignant Periodic Fevers," submitted, as a substitute, through Secretary Brodie, a paper on "Sulphate of Cinchona," which was received as a "voluntary contribution," and referred to a special committee.

Dr. Johnson, of Chicago, asked further time to report on "Excretions, &c." Referred to Committee on Nominations.

Dr. J. M. Newman, of Buffalo, from Committee on "The Sanitary Police of Cities," presented an elaborate report, embracing details of the various estimated causes of disease in cities, as compared with rural localities, together with numerous valuable statistics of mortality in the largest cities of Europe and the Union, of which the Doctor, at the request of the Association, gave a brief verbal abstract. The report, evidently, embodies a vast mass of useful information, with deductions from it that city life is inimicable to health and longevity, and arguments enforcing the urgent necessity for ameliorating the sanitary condition of the populous localities of cities and large towns. Of diseases arising from impure air and insufficient ventilation, classed under the term "zimotic," the report stated that, in 1850, 40 per cent. of all the deaths in the various cities were of that nature. The report also embodied details of the loss of life from cholera, small pox, &c., giving startling expositions of danger from these sources, and recommends the enactment of laws for compulsory ventilation and cleanliness, as well as for vaccination, &c., Accepted and referred to Committee on Publication.

Adjourned to 2, P. M.

AFTERNOON SESSION.

The Association met at 2 o'clock.

Dr. Frost, of Charleston, S. C., offered the following resolution, which was adopted:

Resolved,—That the thanks of this Association are due to the retiring officers, for the zealous and efficient manner in which their duties have been performed; to our late President, for the courtesy and ability with which he has presided over our deliberations; to all the officers for their attention to the laborious duties of their stations—not excepting our Committee on Publication, to whom we must feel indebted for the satisfactory form in which the volume of the transactions appears.

Dr. A. J. Fuller, of Me., Chairman of the Committee on the best treatment of Cholera Infantum, read a report thereon, in which he stated that the pathology of the disease was little understood, and that physicians should interchange views on the subject.

The report was accepted, and referred to the Committee on Publication.

Dr. Green, of N. Y., Chairman of the Committee on the Use and Effects of the Application of Nitrate of Silver to the Throat, read a report thereon. He asserted that great benefits had been derived from topical medication in thoracic diseases—tuberculosis, bronchitis, &c., The report was accepted and referred to the Committee on Publication.

Dr. Flint, of Louisville, Chairman of the Committee on the best mode of rendering the Medical Patronage of the National Government tributary to the honor and improvement of the profession, read a report thereon. He denounced the granting of patents by the United States government to "quack medicines," stating, however, that it appears, from a letter written by the present Commissioner of Patents, that the practice of the office has been to discourage such a use of its functions, and that, during the past fifteen years, but four or five such patents have been granted, although from twenty to thirty applicants therefor have been made per year. The credit of sanitary improvements, Dr. F. said were not due to individuals, but to medical science. Such improvements are never discoveries or revelations, but inductions. The United States government should aid the great cause of medical science, by making appropriations for the publication of the transactions of the National Association, and by paying prizes for the best essays on subjects selected by that Association. The report was accepted, and referred to the Committee on Publication.

The Committee on Nominations made the following report:

The Nominating Committee beg leave to make the following report:

For Chairman of Special Committees for 1857:

Dr. E. R. Peaslee, of Brunswick, Me., on Inflammation, its Pathology and its Relation to the Recuperative Process.

Dr. J. C. Hutchinson, of Brooklyn, N. Y., and Charles E. Isaacs, of New York city, on the Anatomy and Histology of the Cervix Uteri.

Dr. J. Taylor Bradford, of Augusta, Ky., on the treatment of Cholera.

Dr. Mark Stephenson, of N. Y., on the Treatment Best Adapted to each variety of Cataract, with the Method of Operation, Place of Election, Time, Age, &c.

Dr. J. W. Corson, of N. Y., on the Causes of the Impulse of the Heart, and the Agencies which influence it in Health and Disease.

Dr. E. Meredith Reese, of N. Y., on the Causes of Infant Mortality in Large Cities, the Source of its Increase, and the Means for its Diminution.

Dr. J. Foster Jenkins, of Yonkers, N. Y., on Spontaneous Umbilical Hemorrhage of the Newly Born.

Dr. Henry Carpenter, of Lancaster Pa., on the Use of Instruments in Obstetrical Practice.

Dr. Alex. J. Semmes, of Washington, D. C., on the Measures to be Adopted to Remedy the Evils Existing in the Present Mode of Holding Coronor's Inquests.

Dr. J. Marion Sims, of New York city, on the Treatment of the Results of Obstructed Labor.

Dr. J. B. Flint, of Louisville, Ky., on the True Position and Value of Operative Surgery as a Therapeutic Agent.

Dr. G. Volney Dorsey, of Piqua, Ohio, on the Causes and Cure of Indigestion, especially in Relation to the Therapeutic Indications to be derived from the Chemical Composition of the Deposites in the Urine.

Dr. C. B. Coventry, of Utica, N. Y., on the Medical Jurisprudence of Insanity, and the Testimony of Skilled Witnesses in Court of Justice.

Dr. Jos. Leidy, of Philadelphia, Pa., on Human, Animal and Vegetable Parasites.

Dr. M. D. Darnall, of Bainbridge, Ind., on the Value of a Strict Attention to Position in the Treatment of Diseases of the Abdomen.

Dr. George Sutton, of Aurora, Ind., on Milk Sickness.

Dr. J. Pease, of Janesville, Wis., on the Blending and Conversion of the Types of Fever.

Dr. B. S. Woodsworth, of Fort Wayne, Ind., on the Best Substitute for Cinchona and its Preparations in the Treatment of Intermittent Fever and Malarious Neuralgia.

Dr. Franklin Hinkle, of Marietta, Pa., on the Use of Cinchona in Malarious Diseases.

Henry V. Campbell of Augusta, Ga., on the Nervous System in Febrile Diseases.

Dr. John Neill, of Philadelphia, Pa., on the Laws Governing the Deposit of Bone.

Dr. John W. Green, of New York city, on the Intimate Effects of Certain Toxicological Agents in the Animal Tissues and Fluids.

Dr. George Suckley, U. S. A., on the Medical Topography and Fauna of Washington Territory.

Dr. James Cooper, of Hoboken, N. J., on the Flora of Washington and Oregon Territories.

Dr. Chas. E. Isaacs, of N. Y., on the Intimate Structure and the Pathology of the Kidney.

Dr. Israel Moses, of New York City, on the Diseases Incidental to Europeans in their Transition Through Central America.

Dr. T. W. Gordon, of Georgetown, Brown county, O., on the Etiology and Pathology of Epidemic Cholera, to be continued three years, and with power to add any other members.

Dr. H. A. Johnson, of Chicago, on the Excretions as an Index to the Organic Changes going on in the System.

Dr. D. D. Thompson, of Louisville, on the Remedial Effects of Chloroform.

(TO BE CONTINUED.)

EDITORIAL NOTICES.

A LONG RESPITE.

After a long, and, to us, a grievous silence, we are again before our subscribers, and the Medical public. We had fairly gotten under way with our June Number—the present—when our Publishing House, which is the office of three extensively circulated political papers, was so absorbed in the heated contest of the present canvass, that in spite of all contracts, obligations, remonstrances, &c., &c., our poor Journal was completely stranded.

We are now however afloat to fulfil our obligations to our subscribers, and to aid once more in the dissemination of a high toned Medical Literature.

We take this occasion to say a word explanatory of the course pursued by the Journal.

It will be remembered that the first two volumes of the Journal were published at Nashville under the proprietorship of the Editors. Beginning without a single subscriber, during these two years, we issued an edition regularly every two months of 800 copies, two thirds of which were mailed to actual *bona fide* subscribers.

By an arrangement with Messrs. Kinsloe & Brother, the Journal was transferred to this place, they becoming the proprietors and contracting to publish it for three years, with the privilege of five, in a style similar to its former issues.

In order to sustain the Journal the Editorial corps obligated themselves, without compensation, to edit it for the same period. Of the manner in which they have performed that duty they leave their readers to judge.

We regret exceedingly, and it is due to the Publishers for us to state, that the execution of the Journal has not been all that could be expected, the difficulty of providing a finer quality of paper, and the frequent change of compositors, having rendered it somewhat inferior in style.

The press of business in the house operated, much to the regret of the publishers we confidently believe, to bring about the long silence of five months. Many have been the letters which we have received relative to the fate of the Journal, to all of whom we again make our politest bow in once more presenting ourselves before them.

Our Journal has been neglected, and we have felt gratified in the interest which so many have manifested for its welfare—and now it greets its patrons, and asks a cordial welcome.

EDITORS.

☞ This was intended for the June No. Our next issue, to consist of some 200 pages, will be issued forthwith, and will embrace the months of July, August and September. We will give in a third number the months of October, November and December, so that by the close of the year, our subscribers will have received their full complement of 768 pages.

☞ Our next two issues will be necessarily of large size and we will endeavor to present to them an evidence of what the Journal is to be in the future.

☞ We have on hand many valuable contributions, for which we thank our friends. They shall appear in our next.

THE

SOUTHERN JOURNAL

OF THE

MEDICAL AND PHYSICAL SCIENCES.

VOL. IV.] JULY, 1856. [No. 7.

ORIGINAL COMMUNICATIONS.

A SKETCH OF THE GEOLOGY OF TENNESSEE,

(Continued from page 336, Vol. 4, No. 6.)

IRON, LEAD, ZINC, COPPER, GOLD, SILVER.

Iron, (*Continued.*)

The localities of the hydrous peroxide of iron may be stated to be embraced in the counties of Sullivan, Carter, Johnson, Washington, Greene, Cocke, Sevier, Blount, Monroe, Polk and McMinn in East Tennessee, and Warren, White, Coffee, Franklin, Lawrence, Wayne, Hardin, Lewis, Hickman, Perry, Decatur, Dickson, Humphreys, Montgomery, Benton and Stewart in Middle and West Tennessee. It will thus be seen that in the eastern division of this iron field, the ore runs along the declivity of the Unaka range of mountains; while in Middle Tennessee it runs upon that elevated table land which surrounds the fertile agricultural counties—and which was designated by Dr. Troost as the silicious region. The two formations of these two divisions differ in geological position.

3. *The red Hematite or Argillaceous Peroxide of Iron.*—This is the third variety of iron ore for our consideration. It is that variety which occurs as a band all along the eastern declivity of the Cumberland mountains, from the Cumberland Gap to the Raccoon mountains on the Georgia line. It is found of various thicknesses, from one to ten feet, and from the fact of its occurring on the sides of the gaps or coves in the mountain sides, through which the water courses make their way, the inference is fair that it extends deep into the heart of the mountain. In the Sequatchee valley, it is also found cropping out as on the eastern side at nearly the same altitude. It also may be found in several of the counties bordering on the western base of the Unaka mountains.

This ore occurs of different degrees of density, from a hard solid mass, to a soft unctuous lump.

Its streak or powder is *red*. It is known by various names, as *specular iron*, *red chalk*, *dyestone*, *scaly oxide of iron*. The composition of the ore is, according to Phillips,

Iron	70
Oxygen	30
	100

One hundred pounds therefore yielding seventy of metallic iron.

The counties in which this ore is to be found, are Claiborne, Campbell, Anderson, Roane, Rhea, Hamilton, Bledsoe and Marion along the Cumberland range, and in Carter, Johnson, Sullivan, Greene, Cocke, Sevier and Monroe along the Unaka range. One locality is deserving of special notice which, though as yet unexplored, presents such a bold and massive appearance, that it is destined at no distant day, to be the seat of extensive iron establishments; I allude to Elk river Gap, in

Campbell county. The route of the Knoxville and Kentucky Railroad has been located through this Gap. Although all along the Gap there are out-crops of strata of this scaly oxide of iron, yet at one point especially it presents a perpendicular cliff of more than 30 feet, a solid stratum of iron ore, disappearing under the mountain. It may be called the *Iron mountain* of Tennessee. Contiguous to it, all along the mountain heights, may be found coal of a superior quality, while the full, rapid stream of Elk river is sufficient to drive forges of any power.

The different varieties of this ore are distinguished by a greater or less degree of purity and hardness, and hence has received from the miners peculiar names: such as specular iron, red hematite, red chalk or ochre, clay iron stone. That which occurs in the Cumberland mountains is stratified and of different degrees of hardness, some constituting the lenticular argillaceous ore, consisting of small grains agglutinated together.

Some of the strata are also fossiliferous, its surface presenting several species of corals, crinoideal stems and shells.

This ore is profitably worked in all its localities—and is that of which the iron banks of England are usually composed, being found there, as here, associated with her coal measures.

In East Tennessee there are seven furnaces driven with water-power blast, and two with steam-power. There are also eighteen forges and thirty-two fires, in all of which this red hematite is used.

4. *The fourth variety* of Iron ore found in Tennessee is the Sulphuret, generally known as Iron Pyrites, and frequently, especially when in coal, receiving the name of sulphur. This ore is found associated with all of our rocks—being.

found from the Metamorphic slates to the latest limestone. It is associated with the Copper ores in quartz, with the chlorite slate in cubes of various sizes—with the alum and magnesia slates—with the limestones and with sandstones.

Specimens have been collected from the copper region at Ducktown, where it constitutes the *Mundic* of the miners—from the chlorite slate at Coqua Creek in Cubes, where it lies contiguous to the Gold—from the slates of Sevier and Monroe, where by its decomposition it favors the production of alum, and of sulphate of Magnesia—as well as of Copperas—from the limestone of East and Middle Tennessee, where it occurs in detached crystals or masses.

The use of this ore of iron is in the manufacture of Copperas and of Sulphur. The Copperas or sulph. iron is, in fact, the result of the decomposition of the ore by exposure to air and moisture, and is the process which is continually going on in the ore as it occurs—as in cabinet specimens. All that is necessary to produce the copperas of commerce is washing and crystallizing. The Sulphur is obtained by heating the ore to redness, by which it is driven off in fumes into a separate chamber or vessel, where it is condensed.

The abundance of this ore of iron in the hills of East Tennessee holds out inducements to capitalists for a profitable investment in the establishment of manufactories.

5. *Carbonate of Iron* is found quite abundantly in the counties of Morgan and Campbell. It occurs in rounded nodules or pebbles of various sizes, made up of concentric layers. It is a rich ore, easily worked, and its ready accessibility, on the completion of our Kentucky Railroad, will render this a valuable variety. It is also known by the

name of *Clay iron stone* and *sparry iron*. The value of this ore generally arises from its association with the coal measures. It is highly probable that it is quite abundant, and, if found to be so, will add the more to the metallic wealth of our State.

An analysis of one of these iron stones yielded 39 per cent. of metallic iron. My attention was first directed to these nodules by Prof. Mitchell.

6. The sixth variety of iron ore in our State is in detached specimens. It is the *native iron*. This variety, which is pure iron and not an ore, is supposed to be of meteoric origin, but how formed and whence it comes is of course altogether hypothetical. Its characters, as well as its localities—having been in every respect isolated, in roundish masses—indicate its origin. Two specimens are in my possession, the one found in Grainger and the other in White county. The Grainger specimen weighs 4½ ounces, said to have been from a mass of 20 lbs., and the White specimen, half an ounce—size of mass not known. Both specimens present a crystalline structure on the freshly broken surface, of a dark iron color, and readily malleable.

In Dr. Troost's Fifth Report, 1840, there is described the meteoric metallic mass found in Cocke county.

He thus speaks of it:

"The original weight of it is said to have been about two thousand pounds. The parts that I have seen, and that which is in my possession, are a singular heterogeneous mixture, composed of metallic iron, carburet of iron, or graphite, sulphuret of iron, hydroxide of iron, brown and yellow, the brown being very hard, the yellow very soft (like gypsum;) in some pieces all these ingredients form a kind of heterogeneous mixture.

The most interesting part nevertheless, and which occupies about ninety-five hundredths of the whole mass is the *nickeliferous iron*. It is partly of a crystalline structure and partly composed of irregular grains of various sizes and forms, sometimes merely agglutinated, sometimes separated by a thin flexible pellicle of a highly polished metal, viz: highly carbonised iron.' The crystalline part is composed of

laminæ, which vary in thickness forming sometimes equilateral triangles, which are separated, the one from the other, by very thin laminæ or pellicles of a brilliant steel polish as mentioned above, and being remarkably flexible, I expected to find these triangular laminæ placed in such position as to form octahedrons, or showing a cleavage parallel to the sides of that solid; but this is not the case, the cleavage gives a regular tetrahedron. I have one of these forms which measures about one inch from the base to the apex. This metallic iron is besides dispersed in irregularly shaped little masses through a solid compact brown hydrated oxide of iron, through which it is also dispersed in invisible grains, which can only be detected by the magnet which attracts them when the substance has been reduced to powder.

This iron is malleable;—I have in my possession a horse-shoe nail which was made of it without having undergone a previous preparation, and it is harder and whiter than common wrought iron. Its hardness is perhaps owiug to a small quantity of carbon, or perhaps to nickel—but the color of the iron in its natural state, before it has been subjected to any operation, differs much in different parts. In some it is black and has no metallic lustre at all; in others it has a brilliant lustre, and is then always much whiter than steel or common iron.—This iron is but little susceptible of being tarnished when exposed to the action of the atmosphere—the black part may be rendered white by a file. It is covered also here and there with a kind of black varnish."

Prof. Safford, at present Geologist of the State, describes a meteoric mass which fell in Lincoln county. He says:

"This specimen, which now lies before us, has an edge broken off, revealing the character of the interior. Within it is of an ashen-gray color, varied by patches of white, yellowish, and dark minerals. (§ 283.)

With the exception of the broken edge, it is covered, and when first obtained was entirely covered, as most meteorites of this kind are, with a very thin "black, shining crust, as if it had been coated with pitch;" this was doubtless formed by the fusion of its outer surface in its rapid passage through the air.

One end or face, which may be regarded as the base, has an irregular rhomboidal outline, averaging $2\frac{3}{4}$ by $2\frac{1}{2}$ inches. Placing the stone upon this end, the body of it presents the form of an irregular, slightly oblique, rhomboidal prism. The upper end, however, is not well defined, but runs up to one side in a flattened protuberance, giving the entire specimen a form approaching roughly an oblique pyramid. The length from the base to the apex is $4\frac{1}{2}$ inches.

Three adjacant sides are rough, being covered with cavities and pits. It is likely that the stone has been torn off from a larger mass, or from other fragments, along these faces.

The other sides are smoother and rounded, and appear to have constituted a portion of the surface of the larger mass.

The specimen acts upon the needle; fragments of it readily yield particles of nickeliferous iron by trituration in a mortar. The specific gravity of the entire specimen is 3-20. Its weight, in its present condition, 3-83 lbs."

To the same Report of Prof. Safford we are indebted for the following:

TABLE OF TENNESSEE METEORITES.*

No.	County in which found.	General character.	Weight.	Time of falling.	By whom and when described.	Through whom made known.
1	Sumner.	Stony.	11 lbs.	May 9, '27.	Seybert.	
2	Cocke.	Malleable iron.	2000 "	Unknown.	Troost, 1840.	Hon. Jacob Peck.
3	Dickson.	"	9 "	July or Aug., 1835.	" 1845.	J. Voorhies, Esq.
4	Greene.	"	20 "	Unknown.	" 1845.	Mr. Jos. Estabrook and Hon. Jacob Peck.
5	DeKalb.	"	36 "	"	" 1845.	
6	Jackson.	"	15 oz.	"	" 1846.	Col. S. D. Morgan.
7	Smith.	"	280 lbs.	"	" 1846.	" "
8	Rutherford.	"	19 "	"	" 1848.	
9?	Jefferson.	"	2½ lbs.	"	Shepard, 1854.	Hon. Jacob Peck.
10	Claiborne.	"	60 lbs.	"	Shepard, 1854, and Smith, 1855.	Prof. J. B. Mitchell.
11	Campbell.	"	4½ oz.	"	Smith, 1855.	" "
12	Lincoln.	Stony.	3 lbs.	Aug. 5, '55.	Smith, 1856, and Safford, 1856.	Prof. T. C. Blake.
13	White.	Malleable iron.		Unknown.	Currey, 1856.	
14	Grainger.	"	20 lbs.	"	" 1856.	Prof. A. G. Scott.

*Since the foregoing table was arranged for this work, another specimen of native malleable iron has been presented to me by Prof. R. L. Kirkpatrick—and which he obtained in the eastern part of Anderson county. The weight of the specimen is about eight pounds—of a semi-crystalline structure; steel grey lustre, and soft or malleable. It has a thin scale of oxide of iron encrusting the surface, except at one end, which appears to have been broken, (not cut) as the surface is jagged, (not smooth.)

PRODUCTION OF IRON, AND ITS CONSUMPTION.—We have said enough to prove the inexhaustible character of our Iron banks. We have shown that four at least of the varieties are of excellent quality, and are already profitably worked. Nature has placed together in such abundance two of the elements of national greatness, that our State will be blind to her own interests if she does not promote every facility for their development. This she can do by putting into operation extensive systems of railways, stretching over the surface of her territory

like network, and serving as the means for opening up and bringing to market the vast treasures of mineral wealth which lie entombed in the bosom of her hills and mountains. To this England owes much of her present greatness, and not until her iron banks and coal beds are exhausted will the shrill whistle of the Locomotive cease to be heard in her borders. She has felt the importance of those treasures which lie beneath the feet of her overcrowded population, and she promotes every means in her power to develop those resources, so that it may be safely said one-fifth of her population live beneath the surface of her soil.

In contrast with this picture of English operations, what do we see presented in our own country? What in our own Tennessee? We see the singular spectacle of a nation possessing far more of the raw material than England, and yet deriving more largely of the manufactured articles by importation than she manufactures herself, and more than is imported into all other nations on the globe. Her hills are based on iron and her soil is impregnated with it, and yet, when any enterprize of note is undertaken, English or Swedish iron has the preference, if it can be obtained. But although it was contended only a few years ago that we had not the facilities for bringing out the ore and the iron to market, yet now that the Railway system has been so generally adopted, penetrating the inmost recesses of our mountain coves, traversing our fertile valleys, tunneling our Alpine heights, and developing their rich treasures of coal, iron and other minerals, the extent of our own resources will begin to be appreciated, and thousands of busy hands be employed in their production and in their consumption.

From a work on the statistics of coal by R. C. Taylor

we are told that while England produced from her mines in 1845, 1,512,000 tons of iron, the United States only produced 502,000 tons.

In 1852, England manufactured 2,901,000 tons, of which she exported to the United States 808,133 tons, working up the remainder into the various forms of needles, knives, razors, nails, machinery &c., which she distributed throughout the world, the United States taking for her use a large share—fully one-half.

During the same year, the manufacture of iron in the United States amounted to 750,000 tons, or not quite as much as was imported. None of this was exported, showing the amount required at that time for our own consumption, and all of which we should have produced from our own iron banks and coal beds. What is the consequence? Our apathy is arousing English capitalists to avail themselves of our mineral beds—feeling assured that here they can procure iron as good, and profits as great, as by working their own mines. Not a month passes that we are not visited by the agents of some English company, coming to examine for themselves, and for the purpose of investing where they find the chances of success good. We will presently allude to the result of this supineness on the part of our citizens, by which the rich copper district at Ducktown has almost entirely passed into English hands, but few indeed of our citizens holding an interest in them. And yet we say to all, come with your capital for the field is ample, and the resources great.

During the year 1853, according to the Report of the Secretary of the Treasury, the value of iron imported into the United States was $29,015,364, of which nearly $16,000,000 was for bar iron alone; and the duty which

had to be paid on these imports, for that year was $8,104,-609—whereas during 1850, the value of manufactured iron in the United States amounted only to $38,000,000, only one fifth more than was imported a year or two afterwards. And in Tennessee, during the year 1854, the entire value of all the iron manufactured, according to an estimate of the State Geologist, was but little short of *two millions of dollars*. Tennessee thus for the year 1854 bore the ratio to the States of the Union of *one* twentieth in Iron production, and at the same time consumed her share of imported iron for railways, imported machinery, and manufactured products. For her home-made iron she realized less than she expended for the imported products.

New Discovery in the Manufacture of Iron.—In this connection we will insert a brief account of a new process in the manufacture of iron by which much labor is saved, and at less expense.

The earlier manufacturers employed human beings to stir up the molten mass to separate the clay or cinder.—Mr. Nasmith introduced steam for this purpose, by forcing it from below, and causing the mass to boil like a pot. The new discovery employs "air—the food of fire—which permeated the mass, and with carbon of the iron intensified the heat and freed the mass from matter out of place."

While in the ordinary process six heats are necessary to carry the iron through all of its stages of purification—in the new process only one is required. In the ordinary process the ore first passes into pigs—but in the new, it runs from the furnace into the refining pot, where, by increased heat, the superfluous carbon is burned out.—This affords malleable iron ready for the rolls. And here

again a new arrangement is made. Instead of a series of grooves on one cylinder, there are a series of cylinders, with one groove, gradually decreasing in size so that the iron bar introduced at one cylinder passes successively through the entire series without the laborious handling practice din the ordinary process. Thus the ingot, delivered from the refining furnace, passes one rail to the first pair of rolls with its original heat, and through them to the next, and so on till the bars were complete without being touched by the hands.

The great object to be secured by this new process is the manufacture of iron of homogeneous structure as well as in the saving of labor and of expense. Flaws frequently occur in masses of Iron, owing to the imbedding of scales of oxidized iron in the malleable mass, and such flaws are detrimental to machinery, and to artillery pieces. It is believed that the new process obviates such results. The English papers are full of accounts of the new process. By one Journal it is said to produce, *without fail, better iron than Swedish and ten dollars per ton cheaper than common British.* The London Times expresses the conviction that the discoverer "HAS PRODUCED THE GRANDEST OPERATION EVER YET DEVISED IN METALLURGY." By it "the Puddling Furnace is entirely dispensed with, and the new process is said *to convert in a day as much malleable iron as fifty puddling furnaces, and with less than one hundredth part of the labor.*"

Thus it will be seen that the sole process of this new method consists in converting the crude iron from the ordinary blast furnace into ingots of malleable iron or steel which is accomplished by *the application of heat rendered inconceivably intense by blasts of cold air.*

Any one, acquainted with metallurgic processes, knows

what effect atmospheric air has upon red hot iron. In still atmosphere the rapid formation of scales is evidence of slow combustion, but if a strong blast of air be forced upon it, it is rapidly burned away. It is this fact which is made to act in the new plan—*air* is rapidly made to permeate the heated mass of molten iron.

Mr. BESSEMER is the inventor of this new process.

And yet though he has been for two years making experiments with this new process, in our country the same operation has been pursued for three years by the Magnetic Iron Company, Mott Haven.

Zinc.

The Ninth Geological Report of the late Dr. Troost was devoted almost exclusively to a description of the Zinc ores of Tennessee and the mode of their conversion into metallic Zinc.

The most important localities are to be found in East Tennessee. We will describe each of these in detail.

1. *Claiborne Ores.*—The deposits of Zinc in Claiborne county are found near Powell's river, about 20 miles South-West of Tazewell. Shafts have been sunk in several places, and the ore taken out in considerable quantities. It is associated with galena or sulphuret of lead. When we visited these deposits in 1849 we ascertained that they occurred along a great *anticlinal axis* which extended N. E. and S. W. throughout Powell's valley. In many places the ore cropped out upon the surface of the ground, and in others was reached by means of shafts, which had been opened to a depth of about 60 feet. It was found in fissures of the limestones of various thicknesses. The ore found in these deposits consists of three varieties, viz:

1. Carbonate of Zinc—*Calamine.*
2. Silicate of Zinc—*Electric Calamine.*
3. Sulphuret of Zinc—*Blende.*

The mineralogical characters of these three varieties are the same in all localities.

1. *Carbonate of Zinc* is composed of,

Oxide of Zinc	64
Carbonic acid	36
	100

or about 51 per cent of metallic Zinc.

It is found as incrustations or stalactitical concretions —also in porous masses. It possesses a waxy lustre, of an impure white or bluish gray color; sometimes it is of a granular compact structure and opaque.

It is distinguished from other ores of Zinc by its effervescence with acids.

It is found associated with the magnesian limestone.

2. *Silicate of Zinc,* or Electric calamine, is also found with the foregoing variety.

It is composed, according to Dr. Troost, of,

Silica	25
Oxide of Zinc	67
Water, &c.	8
	100

which gives more than 53 per cent of the metal in the ore.

This ore occurs in stalatitical concretions, also mamillary and encrusting.

Its color is white, but varies from that to brown with shades of blue and green. It does not effervesce like the carbonate, but in hot sulphuric acid it dissolves, and the solution on cooling, gelatinizes. By friction or heat, it becomes electric.

In former years this ore and the carbonate, were the only ores used in Europe for the manufacture of metallic Zinc.

Dr. Troost recommends to those who would distinguish these ores from those minerals which they resemble, to expose a small quantity for 15 or 20 minutes to a low red heat, then to pulverise and sift, and mix the powder with pulverised charcoal and filings of copper; then to expose this mixture in a small crucible for a sufficient length of time to the heat of a blacksmith's fire, and see whether the copper has increased in weight, and been converted into brass; if not, no Zinc was present in the specimen assayed.

A readier process is to pulverise the specimen and throw it upon ignited charcoal. If Zinc be present it will volatalize as a white cloud, readily condensing on any cold metallic plate held over it.

Encrusting crystals of quartz are frequently supposed to be Zinc. They may not only be detected by the foregoing process, but also by the microscope revealing the minute prismatic form of the quartz crystals.

3. *Sulphuret of Zinc* or Blende is also a common ore, associated with galena, and with the other ores of Zinc. It is composed, according to Dr. Troost, in the ores from Powell's river of,

Zinc	61.00
Iron	1.50
Lead	7.50
Sulphur	21.00
Earthy matter	9.00
	100,00

Thus it will be seen that there are also other admixtures with this ore of Zinc. Indeed there are frequently found with it the sulphuret of lead, iron, arsenic, cadmia and copper.

This ore has a waxy, yellowish color, and affords a white streak—has the appearance of resin, and not much that of an ore. When heated, it emits fumes of Zinc.

These deposits of Zinc in Claiborne county have not been tested to that degree commensurate with their importance. The value of Zinc, as one of the ingredients of brass, should insure for these localities at least a share of the investment of capitalists, till their true character has been fully developed.

2. *Jefferson ores.*—These same ores of Zinc occur in several localities in Jefferson and other counties. The foregoing description will suffice.

A few miles to the North-east of New Market they are found in irregular veins in the limestone rock, similar to those of Powell's valley.

Throughout New Market valley, surface-specimens of these ores have been found. In some places slight explorations have been made without any discouraging results. Dr. Troost also notices a locality near Dandridge, in a branch running into the French Broad River.

Near Mossy Creek, not far from the East Tennessee and Virginia Railroad, a new deposit has been discovered of carbonate of Zinc, and there is another near the Panther Springs, called the Swingle Mines, both of which localities give fair indications of being valuable.

3. *Knox county ores.*—Following the direction indicated by the veins of Jefferson county, we find that they lead us into Knox county. South of the Holston river, one mile from Knoxville, in the reddish variegated limestone, Dr. M. W. Dickeson found a vein of carbonate of Zinc, which is believed to be important.

On the waters of Roseberry creek, east of Knoxville, there is a fine deposit of carbonate of Zinc, the vein pursuing a N. E. and S. W. course.

In the cut of the Rabun Gap Railroad, within the corporation limits of Knoxville, near the river, a vein of *red Zinc ore* has been opened, associated with the magnesian limestone. Its extent or importance is not known, as it passes under the bluff.

4. *Blount ores.*—Dr. Grant, on the line of the Georgia Railroad, has brought to my notice a fine locality of sulphuret of Zinc, associated with the same magnesian limestone, in Blount county. The specimen presented to me was of fine appearance.

At Loudon, Roane county, there is also said to exist a locality. Following in the same general direction, deposits have been found some eight miles to the South-west on the lands of Mr. Bowman, and on as far as the mouth of Suee Creek, where it empties into the Tennessee. So that taking New Market as a starting point of observation, these irregular veins of Zinc, associated with galena as we will presently show, may be traced either to the South-west along one of the great folds which characterize the geological formations of East Tennessee, or to the North-east into the upper counties. From the representation of friends, we are led to believe that they may be found through Greene, Cocke, and on to Carter county. Specimens of carbonate of Zinc have been shown us from Washington county.

(*To be Continued.*)

ART. XXXIII.—PROGRESSION OF LIFE.

BY W. D. KRESH, M.D., WINNSBORO', S. C.

(Continued from page 348.)

If the vestigarian Hypothesis were true, it would appear that in every set of strata where the species are peculiar, the marine and inferior forms ought always to occur first at the lower ledges of the strata, representing the distinct creation, and the highest types of plants and animals ought always to be found in the top ledges; because each stratum was as long in being deposited, as since the existing species were created and elevated to man. As the cretaceous species are all peculiar, (few common to the Oolite below or Eocene above,) transmutationists look for evidence in the wrong direction, when they look through the whole series of strata, each containing species, instead of looking to each individual stratum. It would require considerable blending of species, common to an upper and lower strata, to render it probable that those of the upper had originated from those of the lower. The time of the occurrence of a class in the whole series, is a matter of little importance to this theory, since climatic influences could prevent their development. The protozoic fish being of the highest types, there is no reason to except the climatic, why they should not have produced as highly organized terrestrial species, as the Triassic, inferior Oolite, Eocene, Post Pliocene, or Present. This mode of transmutation ought to be very nearly restricted in originating existing terrestrial vertebrata to the Post Pliocene, as with the exception of that oldest of existing mammals, the Meles Taxus, (Badger) and perhaps a very few others, all the present species originated at an extremely recent geological date. The vestigarian did not confess fully the truth that there are no scientific facts going to show that man was the last made species, of the existing terrestrial creation.

Those who speak of it as a palaeontological fact, that man was created last of all existing species, ignore all the specific distinctions between the inhabitants of former worlds and the present: they confound man with the other existing terrestrial species. They thus directly admit most fully the whole truth of trans-

mutation; that man originated through monkeys from monads. Of the marine Testacea, their history through innumerable revolutions, before anything existing appeared, down to the successive eras, when only one per cent. of existing species, or three per cent. 5, 10, 17, or 35, and every other proportion up to the whole of existing species successively appeared, has been extensively read out. So the terrestrial vertebrates of the preceeding ages are well learned, down to, and after the time when the last proportions of the extinct marine species disappear; and the diary of the existing terrestrial vertebrates is doubtless well transcribed. They are however, for the most part, yet enveloped beneath the water, where they are yet receiving accessions, but the physical agents, that have ever been unceasingly employed in upheaving one portion of the earth's surface, and depressing another, will also reveal the particulars of the last records.

In the mean time the palaeontology of every age, and of every province, show conclusively that the frailities of humanity are a peculiar feature of the existing world. In reference to the succession of plants, Sir Charles' Reviewer says: "No generalization touching the progression of life on this planet, can be materially affected by the phenomena of one particular group of living beings, least of all by the lowest group." Will the Reviewer admit his own proposition, with regard to the vertebrate group?" "*Plants are the lowest forms of organic life*, &c. It is true there is no very great difference in the perfection or complexity of the organs of a monocotyledonous, and a dicotyledonous plant, but it is that very similarity in their grade of structure which diminishes the force of any argument drawn from vegetable fossils against the ideas of progression," &c. We will not follow the Review, but must remark that the discovery of a Dicotyledonous fossil in the grauwacke slates of Cork, is surely a matter of consideration in this subject, where progressive views have gained so much currency from the alleged inferiority of the early flora, nor, "if plants are the lowest forms of organic life," is there a particle of palæontological evidence, nor even any tendency of the known facts to show that plants were created before animals, neither in the existing creation, in any other crea-

tion individually, nor in all the creations generalized together.

As regards the identity of the varieties of man none can well doubt the moral unity of the family, and I regard it as only a question concerning his anatomical structures. If his physical organization is specifically identical, from the organic law that species are created but once, it amounts to quite a certainty, that he was created in only one locality, or province; if the physical organization of the different nations are specifically distinct, they were created in as many different provinces or nations, as there are specific differences. We decide this without reference to other considerations, for Agassiz has shown that all the so-called evidence from language is utterly worthless, and naturally come to opposite conclusions, from the phenomity of Hybridity. "If it were admitted," says Lyell, "that man was created last of all, still we should by no means, be able to recognize in his entrance upon the earth, the last term of one, and the same series of progressive developments.

For the superiority of man, as compared to the irrational mammalia, is one of kind, rather than of degree, consisting of a rational and moral nature, with an intellect capable of indefinite progression, and not in the perfection of his physical organization, or those instincts in which he resembles the brutes. Physically considered, he may form part of an indefinite series of terrestrial changes, past, present, and to come, but morally and intellectually, he may belong to another system of things immaterial, a system which is not permitted to intercept or disturb the course of the material world, or the laws which govern its changes. We may well know from the existing distribution and development of animal life, over the earth's surface, that from the profusion of reptilian life and its superiority during the mesozoic eras over all existing forms of that class, that the existing mammalian types, may not have been as profusely developed then, as now. All that is contended for by the uniformitarian is, that the same principle, policy, and power, has determined the distribution and development of organic life, during all the successive creations that is now displayed over the different provinces of the earth's surface. That the creative energy and devices have reference

directly to climatic circumstances and conditions, and were not more feeble or less efficient, but were as maturely developed at the Protozoic as they have ever been since that time. They are as eternal as their Author is incomprehensible. A change in organic life implies, in every case, a change of physical circumstances, and a progressive development in, or an unfolding of organic types, only implies a progressive unfolding of physical conditions. "From the earliest period," says Lyell, "at which plants and animals can be proved to have existed, there has been a continual change going on in the position of land and sea accompanied by great fluctuations of climate. To these ever-varying geographical, and climated conditions the state of the animate world has been unceasingly adapted."

This principle of adaptation appears to have been analogous to that which now peoples the arctic, temperate, and tropical regions, with distinct assemblages of species and genera; or which independently of more temperature, gives rise to a predominance of the marsupial tribe of quadrupeds in Australia, and of the placental tribe in Europe and Asia, or to a profusion of reptiles without mammalia in the Galapagos, and of mammalia without reptiles in Greenland.

This theory implies almost necessarily, a very unequal representation at successive periods of the principal classes and orders of plants and animals. No satisfactory proof has yet been discovered of the gradual passage of the earth from a chaotic to a more habitable state, nor of a law of progressive development governing the extinction and renovation of species, and causing the Fauna and Flora to pass from an embryonic to a more perfect condition, from a simple, to a more complex organization.—It was the eternity of the principles of Teleology, or Physiological co-relations, that enabled them to reveal to us the eccentric organic forms of many a bygone world. Another thing is certain, that the principles of general, serial, and special Homology, have revealed the ideal Exemplar, or vertebrated Archetype, as being fully comprehended in the Liburian fish, and has thus demonstrated the eternity of those fundamental principles of organization, that has directed nature, through the wreck of worlds, and by which man has been created.

Parthenogenesis, or the successive procreation by virgin parents, metagenesis those changes of form which a species undergo in the series of successively produced individuals, extending from that developed, from an ovum, to the imago or last perfected individual. Ecdysis, Epigenesis, &c., show that the Author of nature exercises power and principle of action, in imparting to the organic world, devices for the accomplishment of His will.

Enough is demonstrated to show that species originate according to a regularly constituted system of uniform laws, the modus operandi of which has either never been witnessed, or is not manifest enough, to satisfy the genius of humanity. Progression being absolutely true lends no more support to transmutation, than organic creation, as at present manifested over the surface of the earth. The forms are as specifically distinct and separable, no more blended, and no more early allied in the different successive strata, than they are in two different countries, over the surface of the earth.

No one will admit that the 247 species of fresh-water Molusks of Jamaica took their origin from the 10 others that are common to that island, and others of the Carribbean Archipellago. The evidence that creation is conducted according to a uniform system or law, is that certain particular organic forms are ever the peculiar institutions of fresh, brackish or salt water, of a cold, temperate or tropical, moist or dry atmosphere, a peculiar chemical soil, &c., in all countries.

There are few, very few, naturalists, who now deny that the introduction, as well as the extinction of a species, has been a part of the regular course of nature, and that the former, as well as the latter is effected according to regular laws. From the nature of the inorganic causes, most efficient in remodeling the surface of the earth they are in, to a limited extent is irregular in revolutionary action. Yet from palæntological evidence it is not doubted, that if very considerable periods of equal duration could be compared, one with another, "the rate of change in the living as well as in the inorganic world, might be nearly uniform." As the progressionist contends, indeed, for the government of every department of nature by original law, and as the Liburian

itself was long enough for any advance, if the promoting circumstances had then existed; the whole question resolves itself into a matter of the time that the climatic circumstances favored, caused, or admitted advance from type to type. All parties may agree to the original institution of organic law and the only real debateable point is the meteorology of the Protozoic eras, a question, the general principles of which, are intelligible enough. The animate creation is not the product of physical agents, but is determined by *organic law* plying to physical conditions. "There will be no scientific evidence," says Agassiz, "of God's working in nature, until naturalists have shown that the whole creation is the *expression of a thought.*" It does not appear that the scientific revelations from either of the departments of natural sciences have instilled in their votaries any very strong predisposition to anthropomorphise the Deity, or mechanicize his operations. All will agree, that it was the exercised will of Omnipotence, that designed and instituted organic creation; and for man at present to wrangle about the operations of the Incomprehensible, is an absurdity. The tendency of all the facts of nature can only be to truth. Truth is in no case derogatory to the Author of both truth and nature. We must regret other apprehensions: they are pathological. Whether or not, the progression of life be traced back to the universal type, from which all individual organisms originate, embryological researches have carried back the question to the monad type, as the point at which specific distinctions no longer exist, in the form or structure of matter. "The extent," says Owen, "to which the resemblance expressed by the term Unity of Organization, may be traced between the higher and lower organized animals, bears an inverse ratio to their approximation to maturity. All animals resemble each other at the earliest period of their development, which commences with the manifestation of the assimilative and fissiparous properties of the polygastric animalcule: the potential germ of the mammal, can be compared in *form* and *vital actions* to the *monad* alone, and at this period, unity of organization may be predicated of the two terms of the animal kingdom."

At this point the specific distinctions do not exist in the form,

structure or action of organized matter, but in the vital properties of that matter, in vitality. It is in the different metamorphosing properties of matter that specific and generic distinctions exist. A difference in these vital properties is necesssary to a change in the forms, or structures, of organisms. Both chemical and microscopical researches have hitherto failed to detect physical differences in organisms, or structures essentially distinct;—matter awakened or endowed with specific vital properties, becomes the vehicle for the phenomenal manifestation of their peculiarities. Whether the revolutions to which organic nature has been subjected, is the result of changes in the vital properties of organisms effected by regular law; or whether those revolutions have been effected by some other than the several known modes of generation, or in some other manner, is for Physiological enquiry and experiment to unravel. What is the cause of the affilliation or affinity of the Galapagian Fauna and Flora, with the South American. That of the Cape Verd islands, with the African, and that of the five sections of British Islands, having their analogues on the adjoining sections of the European Continent. *Uniformity* in the action of the circumstances that determine the introduction of species, may be inferred from the grouping of genera and families over the different provinces.

It becomes doubly manifest if existing terrestrial species were not congenitally connected with, and descended from those of the preceeding geological epoch, that the causes that decide the introduction of genera and families, notwithstanding their extreme delicacy, are certain and absolute, in their effects. "In the endeavor to trace the origin of our existing mammalia," (that of the western continent) says Sir Richard Owen, "I have been led to view them as descendants of a fraction of a peculiar and extensive mammalian Fauna, which overspread Europe, and Asia at a period geologically recent, yet incalculably remote, and long anterior to any evidence or record of the human race. It would appear indeed, even from the comparisons, which the present state of Palaeontology permits to be instituted between the recent and extinct mammalian Fauna of other great natural divisions of dry land, that these divisions were severally possess-

ed of a series of mammalia as distinct and peculiar in each during the Pliocene period as at the present day. We "find a close and interesting correspondence between the extinct European and Asiatic mammalian Fauna of the Pliocene period, and that of the present day. Species continue to exist of nearly all those genera which are represented by the pliocene and post-pliocene mammalian fossils of the same natural continent and of the immediately adjacent islands of Great Britain. The Bear has its haunts in both Europe and Asia; the Beaver of the Rhine and Danube, represent the great Trogontherium; the Lagomys, and the Tiger exist on both sides of the Himalayan mountain chain; a Hyaena ranges through Syria and Hindostan; the Bactrian Camel typifies the huge Merycotherium of the Liberian drift; the Elephant aud Rhinoceros are still represented in Asia, south of the Himalays. The true Maccacus are peculiar to Asia and a closely allied subgenus (Junus) is naturalized on the rock of Gibraltar. A fossil species of Maccacus was associated with the Elephant and Rhinoceros in England during the period of the deposition of the newer pliocene fresh-water beds.

The more extraordinary extinct forms of mammalia, called Elasmotherium and Sivatherium, have their nearest existing pachydermal and ruminant analogues in the same continent to which those fossils are peculiar; the existing four-horned Antelopes, like their gigantic extinct anologues Sivathere and Bramathere, are peculiar to India, &c. Not a relic of an Elephant, Rhinoceros, Hippopotamus, Bison, Hyaena, or Lagomys, has yet been detected in the caves of the more recent tertiary deposits of South America. On the contrary most of the fossil mammalia from those formations, are as distinct from the European or Asiatic forms as they are closely allied to the peculiarly South American existing genera of mammalia. South America alone, is now inhabited by species of Sloth, Armadillo, Cavy, Aguti, Ctenomys, and Platyrrhine Monkey, but no fossil remains of a quadruped, referable to any of these genera have, yet been discovered in Europe, Asia, or Africa. The types of Bradypus (Sloths) and Dasypus (Armadillos) were however richly represented by diversified and gigantic forms in South America during the geological

periods immediately preceeding the present, and fossil remains of extinct species of Cavia, Coelagenys, Ctenomys and Cebus have hitherto beeen detected exclusively in the continent where these genera still as exclusively exist. Auchenia more remotely typefies Macrauchenia, &c. Australia in like manner yields evidence of analogous correspondence between its last extinct, and its present aboriginal mammalian Fauna, which is the more interesting on account of the very peculiar organization of most of the native quadrupeds of that division of the globe, &c.— Not a trace of a fossil quadruped has been found in New Zealand.

But our present knowledge of the living, and the last exterminated Fauna, of the warm-blooded animals, of that small, but far distant and isolated portion of the earth, shows that the same close analogy existed between them, as has been exemplified in the corresponding Fauna, of the larger natural divisions of dry land. This shows that with extinct, as with existing mammalia particular forms were assigned to particular provinces and what is *still more interesting, and suggestive, that the same forms were restricted to the same provinces at the Pliocene periods as they are at the present day.*" Another circumstance is, the gradual departure of the known mammal creations, from their general observance of the Archetypal pattern, and the continued nearer approach to, or development of existing forms of distinct families.

"Examples of the typical dentition are exceptions in the actual creations, but it was the rule in the forms of mammalia first introduced into this planet; and that too whether the teeth were modified for animal or vegetable food; the Dichodoncus cuspidatus from the eocene or oldest tertiary strata, also (with the Amphicyon major, and Hyaeonodon,) manifest the normal number and kinds of teeth, but with such equality of height of crown, that no interspace is needed to lodge any of the teeth when the jaws are closed, and the series is as entire and uninterrupted as in the human subject." "The Anoplotherium presented to Cuvier the same peculiar continuous detail series." "The Chaeropotamus, Anthracotherium, Hyopotamus, Hyracotherium, Oplotherium, Mericopotamus, Hyppohyus, and other ancient

eocene and miocene tertiary mammalian genera, presented the forty-four teeth in number and kind, according to the typical or normal dentition of the placental mammalia.

The species that have successively appeared in the different creations, since the eocene, have departed more and more from the typical archetype by the entire suppression of some teeth of the typical series, by the excessive development of others; by the diminution in number, no development or coalescence of some of the normal five toes; development of forms, &c., until in the existing creation there are few species, (the Hog being one,) that observe the typical formula. The existing genera, in distinct provinces, came gradually into predominance; and in many cases, the structures were originally combined, that exist now only in different orders. The Oreodon, of the Mauvaises Terres of Nebraska, two species of which carry back the ruminants in this country to the eocene, had an almost unbroken arch of 44 teeth, composed of molars, canines, and *incisors in both jaws*. The grinders were like those of the Elk or Deer, the canines like the omniverous pachyderm pecary, and the cranium approached the Camel and Lamma. It lived on both flesh and vegetables, yet chewed the cud; a ruminating hog allied to the Camel. The Archaeotherium was another contemporary genera, showing anatomical structures combined that has now separated into the different orders of pachyderms, plantigrads and digitigrads. The molar teeth were those of the hog, pecary, and Cabyrousa; the canines of the Bear tribe; the upper part of the skull, cheek bones, and temporal fossal, had the form and dimensions of the Cat tribe.

The existence of ruminants in America during the eocene does not interfere with the gradual development of the class in Europe. Fish were exclusively of Heterocercal types, down to the Magnesian limestone, after which the existing Homocercle type obtained.

Placoid and Ganoid orders still reigned the sea exclusively down to the Cretaceous, at which time the existing Ctenoid and Cycloid orders succeed a grand unfolding of existing conditions. The same rules of distribution that are observed by plants, shell

fish and other animals have also been ever observed by fish. Organic creation has thus always proceeded from the beginning, by the institution of separate and distinct species in communities of more or less distinct or blending provinces, and the introduction and extinction of specific forms of the communities and provinces has gone on until, although there was seldom or never an entire extermination over the whole surface, at any one time, but an ever-continued series of irregular concomitant changes, the features of the entire, and distinct phases. The change or renewal of organic forms was not alone in the interval between the great geological epochs, but was going on *continually*, as is testified by the changes in each particular member of any series. Organic creation has *incessantly* and *unremittingly* plied to each and every change of physical conditions.

The epochs of revolution in Europe and America were not, in general, contemporaneous. Neither were the changes in the different classes of animals (as the marine and terrestrial) pari passu or always synchronous.

If at the end of the mesozoic, there was very nearly an entire extermination over the existing continents, we are not entitled to infer that such was the fact over all the mesozoic continents of the entire earth, the territories of which are now in common with most of their geological records buried beneath the waters of existing oceans.

Every fossil from the Eocene of the Mauvaises Terres of Nebraska, differs specifically from those of all contemporaneous formations elsewhere; neither does the Cretaceous of Texas contain but two fossils, common to the Cretaceous of other countries.

There may be intercallated Cretaceo Eocene strata yet undiscovered, very probably beneath the beds of existing oceans, that may show that some provinces existed comparatively undisturbed, at, and for an inconceivable gap of time between those eras.—There is no reason for any other belief, than that the territories submerged beneath existing oceans are strata as prolific with the records of creation as the emerged continents and islands are.—All the subterranean unstratified rocks have once been melted, but never *simultaneously;* so too all land has been submerged

beneath oceans, but never all at any one time. By physical forces, land as well as water is kept in continued motion. On the eastern continent at this time, the province of Scania is sinking, and a thousand miles of Sweden, and the Bothenian Gulf are undergoing a gradual upheaval. In the Western continent, 600 miles of the western coast of Greenland is subsiding, and extensive regions in South America are becoming more elevated. Some submarine mountains are yet sinking, while other areas of the South sea, are on the rise. We can now, yet tell something of the configuration of the Pacific submerged continent, (not by the direction of the mountain tops or islands, but) by the character of their peculiar Fauna, and Flora, just as we know the relative ages of the western or older, and eastern or younger continent; or the different ages of the Andes, and the infinitely older Alleghany mountains. Reason has demonstrated the inconceivable duration of time, between the relative ages of the Grampian hills, the Alps, and Himalaya; and again between the age of these, and the extremely modern dates of the territories upon which Rome and Naples are built, by the peculiar Fauna and Flora of the different ages, when the transactions occurred.

Such are some of the uses of vitality, its records, and revelations, as preserved in the Diary of its Creator, a stone library of many volumes with ever varied inscriptions, unfolding the history of many a long continued revolutionary organic day.

P. S. I should have remarked, if none of the Tertiary molusks are absolutely and incontestibly identical with existing species, still the proportions that succesively approximate existing species indicate uniformity and precision in the laws according to which species are introduced, and the fact that all existing marine molusks were created during the Pleistocene, and before the existing terrestrial plants and animals were, is not disputed by any one. "A Primordial organic form" as Morton expresses it, the organ of which is lost in the primitive establishment of the state of things now existing, is perhaps the most general acceptation of the term species and whether the human and other species were created in *single pairs*, or in great numbers *broad-cast;* a close inquiry into the existing distribution of plants and fluviatile

vertebrata and invertabrata, will decide. Of all the Phaenogamous plants of New Zealand, 26 genera and 507 species, or more than three-fourths, are autochthons, absolutely peculiar; 193 species, nearly one-fourth of the whole, are common with Austrilia; 89, nearly one-eighth of the whole are common with South America; 77, nearly one-tenth of the whole are common with all three countries; 60, nearly one-twelfth of the whole are common with Europe; 50, nearly one-sixteenth of the whole are common with the Antarctic islands, Fugean, &c. Of the fresh water animals, different rivers of even the same region contain some Autochthons, species created in them alone, and not found any other place; but they are associated with others common to several basins. This branch of the subject is peculiarly instructive, and I know of nothing better calculated to inspire intelligent man with a reverence for an omnipotent and omnipresent God.

ART. XXXV.—TUBERCULAR PHTHISIS.

BY B. FRAZIER, M.D., PIKEVILLE, TENN.

This is a disease with which the profession has become so familiar, that it is now seldom made the subject of an essay. It is not however going too far, when it is asserted that in the whole range of human infirmities, this disease most deserves the study of the physician, whether we regard its great frequency or appalling mortality. Confined to no country, age, sex, or condition of life, it destroys a larger proportion of mankind than all other chronic diseases taken together. Nevertheless it is not the object of the present paper to enter into any lengthy discussion as to the nature of the disease. My only aim is to call the attention of the profession to the advantage of a mountain residence for those threatened with, or suffering from it.

It has long been held that a warm climate is favorable to the prevention and cure of this disease. This opinion is of late being questioned by high authority. Some statistical reports have recently been published, showing that it is as frequent and as fatal amongst the acclimated native population of our south-

ern cities, as it is in northern latitudes. If this was found to be true, it will show that little is gained by a journey to a southern sea board; and if that alluring hope is blasted, the sufferer will naturally inquire for some other, and safer retreat to which he may fly, attended by his constant companion, hope.

The Cumberland mountain, as is well known, is a branch of the great Alleghany range, that traverses our country from north-east, to south-west. This branch leaves the main range in Virginia, and holding a more western course passes diagonally across the State of Tennessee. As it advances south-west, it sends off from the main trunk, the Walden's Ridge, a mountain in itself of considerable extent. These two parallel ridges continue southward until they strike the Tennessee river. South of the river they lose their names, but continue on under the names of Lookout and Raccoon mountains into Alabama. This range of mountains differs in some respects from all others in the United States. Their ascent on every side is bold and abrupt, rising to the height of twenty-five hundred feet above the ocean. But around on top a comparatively level plain extends all along those lofty ridges, from six to ten miles wide. Upon these elevated table lands there is an abundant supply of water at all seasons, of the purest free-stone, as well as many strong chalybeate springs. The atmosphere is dry, fine and invigorating, and the latitude is such as to exempt it from the extremes of heat and cold. As a summer residence it is unsurpassed. The winters also are more uniform, and less liable to sudden changes of temperature than in the valleys between. Persons who reside permanently there, assure me that the cold weather is never felt so acutely on the mountain as it is in the valley. This no doubt arises from the constant dry state of the atmosphere. We have all felt how trying it is to the system, to be exposed all day to a cold damp air, while an atmosphere much colder, if it is free from moisture, will be borne without much suffering. The mountain air is keen and bracing, when in the valley it is often heavily charged with moisture and seems to hang round the system like a wet garment.

Here then is a healthier retreat for the invalid for a permanent re-

sidence than any other portion of our country, and for a summer retreat the world can not show its superior. Its dry and invigorating atmosphere, its shady groves and flowering woodlands, its rich pastures and green meadows, dotted everywhere by droves of happy cattle, its springs of pure water, its embowered rivulets and miniature lakes, and above all its magnificent scenery as seen from either brow and from many a bold and rocky promontory, all taken together make it one of the most delightful retreats to be found in the world.

During a residence of several years in the city of Chattanooga I had frequent opportunity of witnessing the good effect of a residence upon the Lookout mountain. To those predisposed to, or actually suffering under the incipient stage of consumption, at first it was thought that a permanent residence on the mountain would hasten the full development of the disease. But experience has clearly proved this opinion to be false. I have never known a single case where it has not been attended with decided benefit. I am acquainted with several individuals who are yet living, some of them, still on the mountain, who were certainly cured by removing to the mountain and residing permanently there for some years. The first case I shall mention, is that of a lady, Mrs. B. She had been declining for some years, with a strong hereditary tendency to phthisis. Had been coughing for some time, with pain and tightness in the chest.—She gradually grew weaker, and more emaciated until she was barely able to walk, presenting in her general appearance, every indication of the forming stages of the disease. I had occasionally prescribed for her, but felt that there was but little to effect in her case from medication alone.

About this time her husband purchased a farm on Lookout mountain, and announced his intention of moving to it. He was told by some of his medical advisers that the change would be the certain death of his wife and feeling much concerned about it, he sought my advice. I advised him to go, feeling that the pure invigorating atmosphere of the summer might be advantageous; at the same time I doubted whether the winter might not be injurious, and so told him he had better let her pass the

winter at least in the valley. This he assented to, and shortly after in the spring, moved his whole family to the mountain. In a very short time Mrs. B. began to improve, and before the return of cold weather she had entirely regained her health. She became full, stout and rosy, and every symptom of the disease disappeared. She used no medicine of any kind, and in common language, took no care of herself, was actually engaged attending regularly and energetically to her domestic affairs, and to a considerable extent looked after, and carried on the farm, her husband being engaged in the valley. She was so well pleased with the change that she determined to remain on the mountain during the winter, and so continued to live there for four or five years, all the time enjoying uninterrupted good health. Abont two years ago the family getting tired of the mountain, moved to town. Since she has returned, her health is again giving way, and I have lately learned she has gone to the mountain intending to make it her permanent home.

The next case I mention is that of a Mr. F. aged about forty, apparently a stout, vigorous man, and carpenter by trade, had been living in Chattanooga ever since it was first settled and had never suffered from chills during its prevalence there. In the year 1849, his health began to fail; he had two attacks of hemorrhage from the lungs; had a constant and harrassing cough, was much emaciated, and so feeble he was unable most of his time, to leave his room. Continued in this condition for four or five months, getting no better but evidently worse. As a last resort he determined to move to Lookout mountain. Soon after he got there he began to improve. He was soon able to go to work, and has been at it ever since. He too dispensed with medicine entirely; but was actively engaged building and making improvements, as soon as his strength would permit. He is still living on the mountain, a vigorous, hale, healthy, man, with no appearance of consumption about him, and is a living monument of the salubrity and healthfulness of this delightful mountain retreat.

There are two or three other cases nearly similar to those I have detailed, where the benefit was equally striking. Three individuals still reside there and can themselves bear testimony to what I write. The settlement upon Lookout is a delightful summer residence, and is much resorted to by the Southern people during the summer season for pleasure and recreation. But its influence in modifying and controlling this dreaded disease, has not been, it seems to me, sufficiently appreciated. Nor do I look upon the Lookout mountain as possessing any advantages in this respect over Walden's Ridge or Cumberland mountain, in fact since my attention has been called to this subject, I have found on inquiry a number of striking instances where the disease has evidently yielded to a residence upon these mountains, I have really been surprised at the facts all tending to prove the truth of the position I have here assumed. The Cumberland mountain with Walden's ridge, contains on its top, as has before been said, a large area of tillable lands, not very productive, but yet enough so to invite a considerable population. Many parts are thickly settled.

I have taken some pains to inquire of these people in regard to the frequency of this disease amongst them, and they all uniformly tell me they know of no case ever originating there, many tell me of instances of persons coming to live amongst them who were evidently laboring under "breast complaint" who have been completely restored to health by a residence of a few years.

I have been myself living along the base of these mountains for twenty years, most of the time actively engaged in the practice of physic. I have practiced in the city and in the country, in the valleys and upon the mountains, all over this general region of country, and have had to prescribe for many very many cases of consumption. I think I might say from my experience that at least one third of the mortality of the valleys of East Tennessee originate either directly or indirectly, from this cause, and yet I can say from a pretty clear survey of my field of practice, that I have never met with a single case of the disease originating upon these mountains.

All these facts must mean something; then what is the ex-

planation? What is there on these high mountains capable of producing this result? Is it not probable at least, that the dry and salubrious atmosphere connected with out-door employment, and the rough and tumble life of a mountaineer are more conclusive to the full development of the organs of animal life than the heated and confined air of closed rooms or densely populated cities, aided by sedentary habits, luxurious couches, and highly seasoned stimulating food.

The advice of the profession now is to those threatened with Phthisis to active out-door exercise in a pure and healthy atmosphere, and to live temperate in all things, and where let me ask can this object be so well attained as upon these delightful mountain retreats.

However it may be accounted for, I think the fact is sufficiently proved that Tubercular Consumption is often arrested and finally cured, and the hereditary tendency is often rooted out, by a permanent residence on these high mountains. I would not be understood to say that in all stages of the disease a cure would be effected. This disease in its ravages upon the system, reaches a point, where its downward progress is certain and can not be stayed. I only mean to assert that in the early stages of this malady, before it has produced any extensive lesion of the lungs, while the patient is yet able to travel and especially if the progress of its mark is slow, showing itself in its more chronic form, or where there is a hereditary tendency in the family and the parents dread its development in their rising offspring, in all such cases, I think the chances are greatly in favor of a permanent settlement on some of these mountain localities.

ART. XXXV.—PROCEEDINGS OF THE NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIAEION.

(Continued from page 382.)

STANDING COMMITTEES.—*Committee on Publication.*—Drs. Francis G. Smith of Pa., Chairman; Casper Wister, of Pa., Samuel L. Hollingsworth, of Pa., Samuel Lewis of Pa., H. F. Askew, of Del., Wm. Brodie, of Mich., R. C. Foster of Tenn.

Committee on Prize Essays,—Drs. C. K. Winston, of Tenn., Chairman; Ira Conwell, of Tenn., Wm. D. Haggart, of Tenn., J. L. C. Johnson, of Tenn., F. A. Ramsay, of Tenn., Geo. Grant, of Tenn., J. B. Lindsley, of Tenn.

Committee of Arrangements,—Drs. C. K. Winston, of Tenn., Chairman; Ira Conwell, of Tenn., Wm. E. Haggart, of Tenn., J. L. C. Johnson, of Tenn., F. A. Ramsey, of Tenn., Geo. Grant, of Tenn., J. B. Lindsley, of Tenn.

To fill vacancies in the Committee on Medical Topography and Epidemics:

New Hampshire.—Dr. V. P. Fitch, of Ameherst.

California.—Dr. Robert Murray, of Fort Miller.

To fill vacancies in the Committee upon A Uniform System of Registration of Marriages, Births and Deaths:

Vermont,—Dr. Adrian T. Woodward, of Castleton.

Connecticut.—Dr. Wm. B. Casey, of Middletown.

Virginia.—Dr. R. W. Haxall, of Richmond.

California.—Dr. Arthur R. Stout, of San Francisco.

They recommend the continuance of the "Committee to Procure Memorials of the Eminent and Worthy Dead," and that the Report, as far as prepared, be referred to the Committee on Publication.

STANDING CTMMITTEES.—*On Medical Education.*—Dr. E. Geddings, of S. C., Chairman; C. W. Le Boutillier, of Mina., G. F. Mitchell, of O., S. W. Clanton, of Ala., S. W. Butler, of N. J.

On Medical Literature.—Drs. R. Hills, of O., Chairman; D. W. Yandell, of Ky., R. R. Porter, of Del., H. A. Johnson, of Ill., Charles E. Swan, of Maine.

The President stated that Dr. Anderson, of Ala., Chairman of Committe on Medical Education, had sent in his report. It was accepted and referred to the Committee on Publication.

A report from Dr. Worth, of Md., on the Medical Topography and Epidemics of the Eastern Shore of Maryland, was accepted and referred to the Committee on Publication.

A report from Dr. Cain, of S. C., on the Epidemic of Yellow Fever in Charleston, in 1854, was accepted and referred to the Committee on Publication.

A report from Dr. Fenner, of La., on the Medical Topography and Epidemics of Louisiana, was accepted and reforred to the Committe on Publication.

Secretary Brodie stated that he had received a letter from Dr. Dillard, U. S. N., appointed on the Committee on Medical Topography and Epidemics, saying that he could not act, in consequence of having received no appointment as delegate to the Association from the Surgeon General.

Dr. Gunn, of Mich., said three communications had been handed to the Committee of arrangements by the secretaries, which they (the Committee,) had not time to examine. He asked that a special committee be appointed to report on volunteer communications.

Dr. Palmer, of Ill., offered the following, which was adopted:

Resolved, That the volunteer communications in the hands of the Committee of Arrangements be referred, with all other such communications, to a special committee to be appointed by the Chair, residing at the place of publication of the transactions; and if, in their judgment, the papers are worthy, they be referred by them to the Committee on Publication, to go into the transactions of the Association.

The President appointed as such committee, Drs. A. Stille, S. Jackson, and F. J. B. Biddle.

The authors and titles of the volunteer communications were announced by Secretary Brodie as follows:

By Dr. C. J. Chandler, of Rocheport, Mo., on Sulph. Cinchona in Periodic Diseases.

By Dr. Isidor Gluck, of New York, on Formation of Gun Shot Wounds, &c.

Dr. G. P. Flachenberg, on an Improved Method of Applying Compression to the Scrotum.

A member of the Committee on a uniform System of Registration of Marriages, Births and Deaths, stated that they were unable to make a report at present, in consequence of the death of their chairman, Dr. Wilson, of Conn.

The Committee on Medical Literature, for 1855, was continued for another year.

Dr. Gross, of Louisville, tendered, in behalf of the medical profession and the citizens of Louisville, an invitation to the Association to meet in that city in May, 1858. Placed on file.

Dr. Dorsey, of Ohio, offered the following resolution, which was adopted.

Resolved, by the American Medical Association, that the Committee on the Etiology and Pathology of Cholera be instructed to memorialize the Congress of the United States, requesting that Honorable body to grant every necessary assistance which can or will promote the objects for which the Committee has been appointed.

Secretary Brodie read a communication from the Royal Medical and Chirurgical Society of England, thanking the American Medical Association for their present of the eighth volume of their transactions. Ordered placed on file.

Dr. Wister, of Pennsylvania, offered the following, which was adopted:

Resolved, That a committee of three be appointed by the President to correspond with the proper officer of the Smithsonian Institute, inquiring into the possibility of procuring a chamber in that institution for the uses of this Association.

The President appointed as such committee, Drs. Wister, of Pa., Hale, of Washington, and J. Neill, of Pa.

Dr. Phelps of N. Y., offered the following, which was adopted:

Resolved, That the thanks of this Association are due, and are hereby tendered, to the Fire Department of the city of Detroit, for the gratuitous use of their large and commodious hall, so amply furnishing to us accommodation for the convenient transaction of business.

Resolved, That the urbane deportment and elegant hospitalities of the profession and of private individuals, as well as the polite attentions of citizens generally, demand of this Association a high appreciation

of the cultivated manners of this city of the West, and which has tended greatly to enhance the pleasure of the session here of the delegates from abroad.

The Association adjourned to this morning at 9 o'clock.

FOURTH DAY—MORNING SESSION.

The President called the Association to order. The Secretary read the minutes of the preceeding session, which were corrected and approved.

Dr. Palmer of Ill., moved that Dr. Richard Coolidge, of D. C., be substituted in place of Dr. Finley, on the Committee to report on Epidemics. Carried.

Dr. Gunn, of Detroit, from Committee on Credentials, reported the names of new members, by invitation.

Dr. Atlee, of Pa., offered the following:

Resolved, That all voluntary communications hereafter presented to the Association, shall be referred to a special committee of——, to be appointed by the President, on the first annual meeting, whose duty it shall be to examine such communications, and report upon the propriety of their presentation and reference to the Committee on Publication.

Carried.

Dr. Palmer, of Chicago, moved that the above resolutions, together with the suggestions in the report of the Committee on Prize Essays, as to whether any means can be devised to cause an increase of the number of Essays presented, be referred to a special committee, of which Dr. Leidy, of Pa., shall be chairman, to report to the next meeting of the Association. Carried. And G. B. Wood and C. D. Smith, of Phil., were put upon said committee.

J. B. Lindsley, from the committee appointed to prepare a suitable minute, having reference to the death of P. C. Gooch, late Secretary of the Association, begged leave to report the following preamble and resolutions:

WHEREAS, the exhibition of high courage and self-sacrificing devotion to the good of others, is ever honorable to a profession by whose members it is manifested, and worthy of remembrance and emulation:

Resolved, That in the death of P. C. Gooch, of Richmond, Va.,

who nobly volnnteered his services during the pestilence at Norfolk, we recognize a loss to this Association, the profession, and the country. His arduous and successful labors as Secretary of the meeting at Charleston and Richmond, merited the regard of this Association; the zeal, ability, and industry manifested by him as the founder and editor of the Stethoscope—the first medical periodical established in Va.—showed his devotion to the cause of medical progress and activity, and the manner of his death gave signal evidence that he was one of whom his country might well be proud.

Resolved, That a copy of these resolutions be transmitted by the Secretary to the relatives of the late Dr. Gooch. Carried.

Dr. Samuel Denton, of Michigan, offered the following:

Resolved, That a committee of three be appointed whose duty it shall be to enlist some enterprising publisher, and aid in collecting and arranging material for an American Medical Directory.

Laid on the table.

Dr. Smith, of N. Y., moved that a special committee be appointed to report at the next meeting of this Association, a classification of those diseases which involve a derangement of the mental manifestations. Carried, and leave given the mover to appoint the committee, he being chairman.

The Secretary read an invitatien from Dr. Childs, of Boston, inviting the members of the Association to meet with the Massachusetts Med. Society on the first Wednesday of May. Accepted.

Dr. Atlee, of Pa., moved that a copy of the Associations transactions be sent to the Epidemological Society of London. Carried.

Dr. Gunn, of Mich., moved that any new Medical Society, not heretofore represented in this Association, be required to transmit to the Secretary, with the credentials of its delegates, the evidence of its existence, capacity, and good standing. Carried.

Dr. McGugan moved that a special committee be appointed to report on the subject of "Stomatitis Materna." Carried.

Dr. Bailey moved that Dr. N. S. Davis be requested to continue his observations on the subject of the changes produced in the composition and qualities of milk by pregnancy and menstruation; also the best substitute for the mother's milk when weaning becomes necessary before the child is eighteen months old, and report at the next meeting of the Association. Carried.

Dr. Atlee, of Pa., moved that the thanks of the Association be tendered to all railroad companies who had furnished members with passes to this convention. Carried.

Dr. Palmer, of Ill., called for some disposition to be made of the resolutions appended to his report on the organization of Medical Societies.

On motion of Dr. Atlee, they were referred with the report for publication.

Dr. Palmer, of Ill., moved that the Association tender a vote of thanks to the press of Detroit for the interest and attention given to their sessions in this city. Carried.

Dr. Palmer, of Ill., moved that the committee on registrations have leave now to present a partial report, which is hereby referred to the committee on publication. Carried.

Dr. Lindsley, of Tenn., offered the following:

WHEREAS, it is the object of this Association, in the award of its prizes for communications upon subjects appertaining to medical science, to encourage the progress of the latter, and as this result can not be better attained than through original investigation and discovery:

Resolved, That hereafter an annual prize of $100 be awarded for the best memoir or essay, founded on original investigation of the author, and in case of no memoir or essay being presented worthy of such award the prize money to be appropriated towards the expense of publishing and illustrating such memoirs as may be subsequently deemed worthy of an award. Carried.

On motion, the Association then adjourned to meet at Nashville, Tenn., on the first Tuesday of May, 1857.

RECORD OF MEDICAL SCIENCES.

TREATMENT OF MENINGITIS BY EARLY AND FREE VENESECTION.

BY J. W. MCKINNEY, ILL.

(*N. W. Med. and Surg. Journal, March* 1856.)

The cases here spoken of by Dr. McKinney, are distinguished by him from those of an intermittent character. They are those which are preceeded by vague uneasiness, depression of spirits, tinnitus aurium, vertigo, and in whom pain in the head exists *antecedently to the febrile* phenomena. In the cases there was nausea, vomiting, eyes suffused, sensitiveness to noise and light, chilly rigors—the surface of skin becoming covered with *horrida cutis*, pulse sharp and full, attended with spasm of muscles of face and arms. Delirium finally sets in, succeeded by drowsiness —pupils dilated, grinding of teeth with frequent deep sighing—and soon the patient sinks.

The pain which occurs in the head at the commencement of the disease, is referred to the *coronal*, *temporal* or frontal region, and *not* to the base or back part.

Dr. McK. attended 29 cases in a practice of eight years, of which 17 occurred during the Winter months, six in the Spring months, and 5 in the Autumn. Eighteen cases were children under 12 years of age. In seven of the cases of children he did not have the opportunity of bleeding. He resorted to Mercurial purges—cold applications to forehead—oil of Turpentine to spine, sinapisms to extemities, and iodide of potassa, 20 grs. to the ounce of water to be given in dessert spoonful doses every 5 or 6 hours. Of the seven, six died. There were four other cases in whom he did not practice venesection, of whom three died, making nine out of eleven. The remaining eighteen cases all recovered. Dr. McK. says:

Was called, Nov. 13, 1855, to see Mr. J. F., aged 39 years, farmer, of a plethoric constitution, with an increased corpulency beyond that of an ordinary fleshy person, who had been attacked on the evening of the second day previous, with headache, nausea, and general lassitude—what he supposed to be "sick headache."

During the day and night previous to my visit, all these symptoms became gradually but greatly increased, with occasionally chilly rigors and vomiting.

The following were the symptoms as presented on the morning of the 13th:

Frequent small pulse, lancinating pain in the head, eyes suffused with tears, with small contracted pupil and total inability to behold any object in the room; very sensitive to the slightest noise, with tinnitus aurium, or rather a crashing sound in the ears; surface of the whole body and extremities, preternaturally cold, and presenting a horrida cutis appearance; tongue loaded with a white coating; constant nausea, with frequent vomiturition.

Occasionally there was light clonic spasms of the muscles of the superior extremities, lasting from a half to one minute, during which the eyes were drawn in their orbits, spasmodically to the left side.

In consequence of the state of the pulse, and general coldness of the surface above described, I did not proceed at once to take blood from the arm, but administered an emeto-cathartic of ipecac, 20 grs., calomel, 60 grs., forthwith, and applied sinapisms to the wrists and ankles, ordering dry friction with flannel cloths, to be made on the extremities, and cloths dipped in cold water, to the head. After emesis was produced one or twice, ordered mustard over the stomach, and as soon as vomiting ceased, a tablespoonful and a half of oil with 30 gtts. spts. turpentine, to be administered. I now left the patient, giving orders that so soon as the pulse became full, to send a messenger and I would again visit. At nine o'clock the following night the messenger came, requesting me to go in great haste, stating "that Mr. J. F. had fits." When I arrived, I found him in a state similar to that just succeeding a violent epileptic convulsion. On enquiry of one of the friends present, I learned he had no less than four or five spasms within the last hour and a half. The medicine given in the morning operated kindly, producing emesis three times, and evacuating the bowels freely four times. Finding my patient now with a full, bounding pulse, and during the intermission between spasms, requiring the effort of three men to keep him on the bed, and from doing violence, I prepared, as speedily as possible, to bleed him. His head being elevated—cloths wet with cold water constantly applied thereto, and mustard drafts to the extremities; all were not sufficient to protect him against another spasm, in which every muscle of the whole frame was most violently convulsed. So soon as the relaxation of the muscles would permit.

my doing so, I corded the arm and opened a large orifice in the median cephalic vein, from which I drew away three and a half pints (56 oz.,) of blood. Some pallor of the lips and face being observable, and the pulse considerably softened, I closed the orifice, and was proceeding to bind up the arm, when another spasm came on. I immediately tore away the bandage, and suffered the blood to flow again till two pint cups (32 oz.,) were filled. This produced a decided impression, and at once put an end to all further convulsions. The bed being so arranged as to keep his head and chest still elevated, I ordered a continuation of the refrigerant application of water as long as the temperature should remain morbid, with the renewal of the drafts to the extremities.

Nov. 14th, 8 o'clock, A. M. Patient has remained tolerably quiet during the latter part of the night; and swallowed nothing since last evening. Pulse frequent and quick, but easily compressed; heat of the surface above that of the natural temperature; delirous and more restless than during the after part of the night. Ordered cold water and drafts to be continued as before, with oil of turpentine along the whole course of the spine, and as soon as patient could be got to swallow, to give 20 gr. calomel in a tablespoonful of oil.

4 o'clock, P. M. Had revived slightly, so as to take a spoonful of water and the greater portion of the dose left in the morning. I now ordered repeated doses of oil every three hours, till the bowels were operated, and then 6 grs. iod. potas. in two ounces of water, every four hours.

15th. Patient better. Oil and calomel had operated twice; had taken five doses of the iod. solution; slight mercurial fetor on the breath; drowsy. When aroused, answers all questions, in a slow undertone, by "No."

Continue use of iod. solut., and occasionally refrigerant to the head.

16th. Better. Answers questions more rationally; complains some of sore mouth; says that any noise in the room produces a confused, unpleasant sensation in his head.

Continue treatment; only prolonging the time of giving the solut. to every six hours.

17th. Decidedly better. Asks for something to eat: permitted him to take some rice gruel. Directed iodide to be continued in diminished doses; also, three or four gr. doses of quinia, twice daily, as a preventative against the deleterious influences of malaria.

From this time on, he rapidly gained the equilibrium of health.

EDITORIAL NOTICES.

TO THE PATRONS OF THE SOUTHERN JOURNAL.

So many things have combined to retard the progress of our Journal during the year just closed, that with the consent of our Patrons, we are disposed to wipe out and begin again.

We therefore announce that a new arrangement has been effected by which we, the Editor, becomes in part the Proprietor of the Journal.

Of the volume for 1856, only seven Numbers have been issued, and as the year has closed, we will stop right there, and begin a new volume with January, 1857. To those subscribers who have paid Three Dollars for 1856—we give them credit for one half of the volume for 1857. To those who have not paid, and who owe us for past volumes, we will send our January No. that they may see the improved character of our Journal, and if they feel disposed to continue with us in our books, all they have to do is to remit in full for the past—and the amount of subscription of the new volume, and we will cheerfully contribute to their medical entertainment monthly for another year. We would be loth to part company with any one, especially since the past of our Journal has not been so brilliant as we could have wished, and if they will only give us a showing we intend that they shall see that a Journal *can* be sustained here as well as elsewhere. This showing will consist in a prompt remittance of the *dimes*, without which we can get neither type, ink, paper, nor work done. All accounts will therefore be sent out in the January Number. Be pleased therefore to see the Prospectus of the new volume on another page.

RICHARD O. CURREY.

THE JANUARY NUMBER FOR 1857

Will constitute the first Number for volume V. We intend it shall be a Number of which the Profession of East Tennessee,

as it is published in their midst, shall be proud. The paper on which it will be printed will be of fine book quality and the type clear and distinct. It will contain several valuable communications, together with a choice selection of articles from home and foreign journals for the Monthly Record. We have the promise from some of the ablest writers and medical observers in the South to furnish for our pages the result of their observations.

The January Number will be sent to all of our subscribers, and hope they may be so pleased with our improved appearance as to remit at once the amount of subscription, Three Dollars, as well as any amount due for past volumes.

Remember that to all such the Journal will be sent for the entire year Free of Postage and,

Remember also that to all such we will present a copy of our book on the *Geology of Tennessee*, now in press, which contains a fine Geological map and numerous sections. We may add that as this work has special reference to the mineral resources of East Tennessee, it is particularly applicable to East Tennesse Physicians.

The January No. will contain an Extract from the very able address of Dr. Samuel Pride, of Maryville, delivered before the East Tennessee Medical Society.

CHARACTER OF THE NEW VOLUME.

The forthcoming volume will maintain its high-toned character, giving no compromise to quackery of any garb whatever, whether in practice or in precept—whether in the nostrum maker, or in the puffing-ones-self-braggadocio-know-every-thing medical gentleman; against quackery in all shapes, under every aspect, of every size, of all colors, in every place, the Southern Journal pledges to wage a warfare and to conquer or die in the attempt.

But while it will thus expose the pitiful plans to which the quack resorts for imposing himself upon a too credulous people, it will not soil its pages with low and abusve epithets —choosing rather that reason and argument should hold sway

than abuse and low badinage. Exposures thus made, and the minds of the community enlightened, reason will exercise its influence and control the action.

Again, the Journal will aim, as it has heretofore done, to elevate the standard of medical education and of medical character. It will aim to take the young man just out from the Lecture Room and guide him by that universal code which is applicable to all human conduct and intercourse. It will counsel with those who are already engaged in the contest against disease and misery, and will hope to profit by their advice, as well as to serve as a camp fire to indicate the position they occupy.

Again, the Journal will have access to every other Journal published in the Union, besides many from the old Halls of Science in the Old World. At least one third of its pages will be filled monthly with the newest and most important discoveries in every department of Medicine, so classified, that each will be embraced in their own peculiar department.

These are a few of the things which we promise to do, and health and strength of mind and body continued to us, and the generous encouragement of at least some of those who feel interested in the advancement of truly scientific medicine being extended to us, we will do as we say.

Friends, *brethren of the medical Profession everywhere*, MEMBERS OF THE FRATERNITY IN EAST TENNESSEE, will you stand by us in the labor which we have undertaken? Will you hold up our hands in this contest? Will you? Then subscribe and remit the amount at once. *Remembering* that advance payment secures Free Postage, and a Premium of a book that is worth one half of the year's subscription to the Journal. Direct to, R. O. Currey, Knoxville Tenn.

☞ In the January No. our subscribers, who have not paid for past volumes, will find the account of their indebtedness to the Journal, to which will be added the price of subscription for 1857. By remitting the entire amount to us they will confer a

special favor. But lest there may be some who do not wish to be continued as subscribers for another year, we *especially* request that they will return the January No. and in the meantime *do not forget to remit what may be due for past volumes.*

It is our aim to do a *cash business*, and all subscriptions are due on the reception of the first Number.

In the Prospectus we say that the terms are Three Dollars if paid in advance. If not paid, it will be discretionary with us whether the names of delinquents are permitted to remain on our books.

VOLUME V. FOR 1857.

THE

SOUTHERN JOURNAL

OF THE

MEDICAL AND PHYSICAL SCIENCES.

EDITED BY

RICHARD O. CURREY, A.M., M.D.,

Cor. Sec. of the East Tennessee Medical Society; Member of Tennessee State Medical Society; formerly Professor of Chemistry and Natural Sciences in East Tennessee University.

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WILLIAM P. JONES, M.D, Nashville, Tenn.

The object of this Journal, as its name indicates, is to advance the interests of *Medical Literature* in the South; while it is the accredited organ of the East Tennessee Medical Society, and thereby the exponent of its membership, it is essentially a private enterprise, and will consequently be made also to reflect the character of the Medical Sciences throughout the entire South.

Each number will contain Original Essays; Analysis of Home and Foreign Intelligence in Practical Medicine and Surgery; Abstracts from Clinical Reports, and from the Proceedings of Medical Societies; Reviews, Bibliographical Notices, and Editorials.

The Southern Journal will still occupy its position as a *faithful and independent* record of the present state and progressive advancement of the different departments of Medicine; aiming to meet the wants and deserve the approbation of our professional brethren in the South and West, and to afford a desirable medium of communication with the Profession throughout the Union.

The Journal will be issued *monthly*—between the first and tenth days—each number containing eighty octavo pages; making two volumes in the year, of 480 pages each, illustrated as occasion may require.

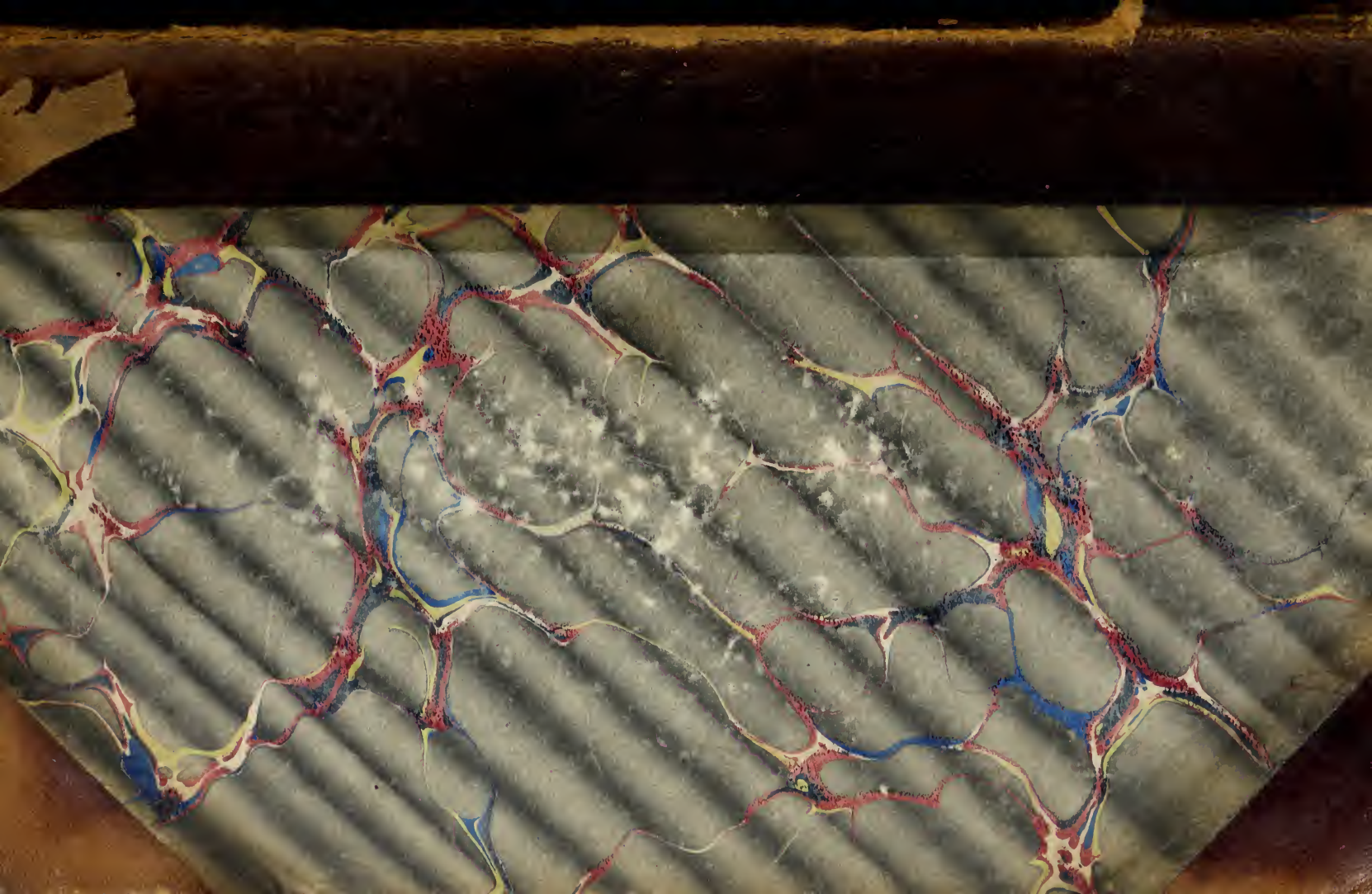
Communications, essays, and items of Medical intelligence are respectfully solicited from the Profession everywhere—especially from those whose organ it has become.

Terms—Three Dollars, if paid *in advance*, or Four Dollars if payment is deferred beyond six months.

Inducement to pay in advance.—To all subscribers who will pay in advance, or after the reception of the first number, the Journal will be sent *free of postage*, and a premium of our book on the Geology of Tennessee, now in press, will be given. This work itself will be sold otherwise for at least *one dollar*.

Exchanges and *books for review* must be sent to the address of the Journal, at Knoxville, Tenn. Publishers will please note this.

☞ All communications for the Journal, letters on business—as subscriptions, advertisements and remittances—must be directed to the editor,

RICHARD O. CURREY,

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